

CONFIDENTIAL

INPUT QUESTIONNAIRE

CATALOG. NO.	A	A		
SIC. CODE				
SIZE CODE				
AREA CODE				
STUDY CODE				
DATE	0			77
MM DD YY				

STUDY TITLE: AAA100

TYPE OF INTERVIEW: ON-SITE USER

INTERVIEWER: _____

COMPANY: _____ CO. TYPE: _____

ADDRESS: _____ SALES: _____

_____ # EMPL: _____

INDUSTRY

<input type="checkbox"/> DISCRETE MANUFACTURING	<input type="checkbox"/> UTILITIES	<input type="checkbox"/> INSURANCE
<input type="checkbox"/> PROCESS MANUFACTURING	<input type="checkbox"/> RETAIL	<input type="checkbox"/> GOVERNMENT - FEDERAL
<input type="checkbox"/> TRANSPORTATION	<input type="checkbox"/> BANKING	<input type="checkbox"/> GOVERNMENT - STATE & LOCAL
<input type="checkbox"/> MEDICAL	<input type="checkbox"/> WHOLESALE	<input type="checkbox"/> EDUCATION
<input type="checkbox"/> SERVICES	<input type="checkbox"/> OTHER	

INTERVIEWS

NAME	TITLE	TELEPHONE NO.

SUMMARY

REFERENCES

USER QUESTIONNAIREA. DEMOGRAPHICS (INDUSTRY ORIENTED)

1. Type of activity or activities at location (check)

- a) Engineering
- b) Manufacturing
- c) Warehousing
- d) Administrative
- e) Sales
- f) Other (describe)

(Complete 2 or 3)

2. Type of industry and size of enterprise

- a) Product(s):

- b) SIC Code:

- c) Number of employees:

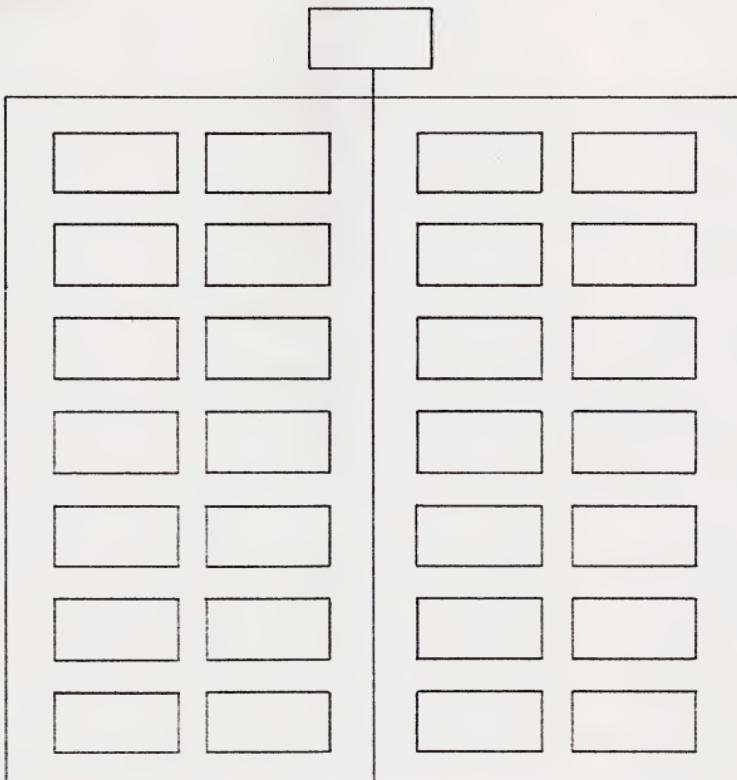
3. Type of Industry and size of establishment

a) Product(s):

b) SIC Code:

c) Number of employees:

4. Enterprise Organization
(Complete functional, geographic, manpower and reporting structure
and indicate respondent)



B. INSTALLED BASE AT ESTABLISHMENT/ENTERPRISE

5. Establishment/Enterprise (encircle one)

6. Systems installed

Quantity	Make/Model	Date Installed

7. Primary applications performed:

a)

b)

c)

8. Describe relationship or tie-ins with other systems (e.g., process control, order entry, office operations, etc.)

a)

b)

c)

d)

C. DDP - GENERAL

9. What is your definition of DDP?

10. Are you doing any DDP now?

a) Yes _____ * (go to question #12)

b) No _____

11. Are you planning on doing DDP in the future?

a) Yes _____ Date: * (go to question #12)

b) No _____

c) If "no", why not? * (go to question #13)

12. (For actual/planned DDP user)

Describe your critical applications actual/planned for DDP:

13. (For non-user, present or future)

a) What do you believe are strengths/weaknesses of DDP?

b) What must happen for you to consider DDP?

14. Do you believe DDP demands strong/weak centralized control?

a) _____ strong

b) _____ weak

c) Why?

15. What impact do you think the following factors will have on DDP?

a) Satellite communications:

b) Automation of the office:

c) The present lack of standardization:

d) Software/hardware compatibility:

D. DDP USERS

16. What DDP systems are installed/planned?

Year	(a) Installed/ Planned	(b) Location: (a) Central (b) Remote (c) DDP	(c) Quantity	(d) Hardware and Cost	(e) Expense Split of *Applications and List Mode (a) Batch (b) Interactive (c) Event Driven
1977:					
1980:					
1983:					
1986:					

* See Applications List"

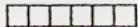
17. Sketch the outline plan for your actual/planned DDP system:

18. Who made the final product selection decision? (title and location)

19. Describe the cost justification procedure used and results:

20. Rate the following factors as to their degree of importance in selecting a DDP vendor: (1 = critical; 5 = unimportant)

Rating:	
a) Product price/performance	a) _____
b) Product reliability	b) _____
c) Vendor image/viability	c) _____
d) Offers systems software	d) _____
e) Offers applications software	e) _____
f) Maintenance capability	f) _____
g) Short term lease availability (24 month)	g) _____
h) Other	h) _____



21. What is the single greatest motivator for going to DDP?
22. Whose budget absorbs the DDP expenses?
23. What EDP methods did DDP replace?
24. Description of data bases:
25. Size of data bases:
26. How will they be distributed?



27. Describe the DDP communications requirements:

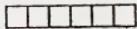
a) Line speeds:

b) Data volumes:

c) Protocols:

d) Other:

28. What personnel requirements/training do you have for your operation of DDP?



29. Maintenance is handled by whom?

a) Hardware:

b) Software:

c) Communications:

30. Describe your software used/planned for DDP:

a) Source(s)

b) Language

c) Applications development

d) Data Base Management System (DBMS)

31. How would you rate your satisfaction with DDP? (1 = outstanding;
5 = very poor)

32. What do you like best about DDP? (strengths)

33. What do you like least? (weaknesses)

34. Rate the following factors as to importance concerning your data security needs: (1 - very important; 5 = unimportant)

	Rating:
a) Hardware identification	(a)
b) Terminal key lock	(b)
c) Communications encryption	(c)
d) Data storage encryption	(d)
e) Security journalling for audit trail	(e)

35. Describe what you believe will be the future technological, economic or other factors affecting DDP, and when:

36. Positive factors of DDP:

a)

b)

c)

37. Negative factors of DDP:

a)

b)

c)

38. What do you believe are the most important criteria for the success/failure of DDP?

39. What five companies do you believe are the most influential in promoting the success of DDP? (in order)

a)

b)

c)

d)

e)

40. What DDP products do you believe are offered by:

a) IBM/D.P.D.:

b) IBM/G.S.D.:

APPLICATIONS LIST

COMMON APPLICATIONS

- 1 Billing
- 2 Inventory Accounting/Control
- 3 Accounts Receivable
- 4 Sales Analysis
- 5 Order Entry
- 6 Payroll and Labor Distribution
- 7 Accounts Payable
- 8 General Ledger
- 9 Cost Accounting
- 10 Job Costing
- 11 Purchase Order Writing
- 12 Receiving
- 13 Shipping
- 14 Personnel Records
- 15 Fixed Asset Accounting
- 16 Facilities/Equipment Maintenance
- 17 Budget Administration
- 18 Tax and Government Reporting
- 19 Stockholder Records
- 20 Mailings/Mailing Lists
- 21 Data Servicing Other Companies
- 22 Math/Statistical Analysis
- 23 Word Processing
- 24 Engineering/Research/Advanced Mgt. Computing
- 25 Remote Job Entry

DISTRIBUTION

- 26 Route Accounting
- 27 Big Ticket Inquiry/Reservation
- 28 Order Allocation
- 29 Stock Replenishment
- 30 Shelf Price Labels
- 31 Credit Authorization
- 32 Cash Management
- 33 Sales Audit
- 34 Other Distribution Applications

EDUCATION

- 35 Computer Education
- 36 Student Problem Solving
- 37 Computer Assisted Instruction
- 38 Student Records
- 39 Grade (Mark) Reporting
- 40 Student Scheduling
- 41 Attendance Accounting
- 42 Admissions/Registration
- 43 Alumni Records
- 44 Fund Raising
- 45 Census
- 46 Student Activities
- 47 Student Financial Aid
- 48 Supplies/Inventory
- 49 Other Education Applications

FINANCE

- 50 Demand Deposit Accounting
- 51 Saving Loan Deposit Accounting
- 52 Consumer Loans
- 53 Mortgage Loans
- 54 Commercial Loans
- 55 Proof of Deposit
- 56 Transit
- 57 Personal Trust
- 58 Corporate Trust
- 59 Customer Information System
- 60 Investment Management
- 61 On-Line Teller System
- 62 Correspondent Bank Servicing
- 63 Other Finance Applications

GOVERNMENT

- 64 Elections and Registration
- 65 Document Retrieval
- 66 Bill Status/Index/Retrieval
- 67 Appropriation Accounting
- 68 Income Tax
- 69 Property Tax
- 70 Other Tax
- 71 Licensing
- 72 All Other Revenues Accounting
- 73 Traffic Citation Processing
- 74 Welfare and Social Assistance
- 75 Vehicle Registration
- 76 Other Government Applications

HOSPITALS AND HEALTH

- 77 Third Party Claims
- 78 Admissions and Discharge
- 79 Patient Identification
- 80 Bed Availability/Census
- 81 Medical Records and Statistics
- 82 Automated Patient Records
- 83 Laboratory Reporting
- 84 Medicare Cost Allocation
- 85 Supplies Inventory
- 86 Cafeteria/Menu
- 87 Other Health Applications

HOTELS AND MOTELS

- 88 Front Office
- 89 Back Office
- 90 Reservations

INSURANCE

- 91 File Maintenance
- 92 Policy Accounting
- 93 Commission Accounting
- 94 Policy Issue/Renewals
- 95 Claims Processing
- 96 Policyholder's Services
- 97 Actuarial and Statistical
- 98 Agency Accounting
- 99 Reinsurance Administration
- 100 Other Insurance Applications

LEGAL

- 101 Time Accounting
- 102 Disbursement Accounting

PUBLIC ACCOUNTING

- 103 Client Accounting
- 106 Time Accounting

MANUFACTURING

- 104 Bill of Material Maintenance
- 105 Engineering and Production Data
- 107 Demand Forecasting
- 108 Order Tracking and Inquiry
- 109 Materials Requirements Planning
- 110 Inventory Management/Acctg.
- 111 Shop Loading
- 112 Order Release
- 113 Shop Scheduling
- 114 Material Move Control
- 115 Stores Inventory Control
- 116 Product Costing/Estimating
- 117 Equipment Acctg. and Location Control
- 118 Project Management and Control
- 119 Cash Management
- 120 Numeric Controlled Tools
- 121 Time and Attendance
- 122 Shop Floor Data Collection
- 123 Other Manufacturing Applications

MEDIA

- 124 Classified Advertising
- 125 Media Analysis
- 126 Broadcasting Log
- 127 Other Media Applications

REAL ESTATE

- 128 Property Management
- 129 Listings and Sales

SECURITIES

- 130 P&S
- 131 Stock Record/Dividends
- 132 Clearing
- 133 Bookkeeping/Statements
- 134 Name and Address Maintenance
- 135 Margin and Cash Accounting
- 136 Certificate Safekeeping
- 137 Commission Analysis
- 138 Portfolio Applications
- 139 Mutual Fund Accounting
- 140 Firm Trading Accounting
- 141 Commodities Accounting
- 142 Options Accounting
- 143 Other Securities Applications

MOTOR FREIGHT

- 144 Freight Bill Entry
- 145 Interline Payables
- 146 Shipment Analysis
- 147 Owner/Operator Accounting
- 148 Rate Analysis
- 149 Equipment Inventory
- 150 Other Motor Freight Applications

RAILROADS

- 151 Revenue Accounting
- 152 Car Accounting
- 153 Freight Forwarder Accounting
- 154 Other Transportation Applications

UTILITIES COMMUNICATIONS

- 155 Customer Records
- 156 Revenue Accounting
- 157 Materials Management

UTILITIES POWER

- 158 Customer Records
- 159 Revenue Accounting
- 160 Materials Management

APPLICATION STRUCTURE

- 1000 Industrial Automation
 - 1100 Process Control
 - 1110 Continuous Processes
 - 1120 Batch Processes
 - 1200 Test and Inspection
 - 1210 Electrical Test and Inspection
 - 1220 Other Test and Inspection
 - 1300 Production Monitoring
 - 1400 Discrete Piece Manufacturing
 - 1410 Metalworking Machine Control (CNC, DNC)
 - 1420 Other Metalworking Equipment
 - 1430 Electronic Production Equipment
 - 1440 Non-Metalworking Equipment
 - 1450 N. C. Tape Preparation
 - 1500 Analytical Laboratory Systems
 - 1510 Lab Automation
 - 1520 Instrument Automation
 - 1530 Experiment Monitoring
 - 1600 Materials Handling
 - 1610 Automatic Storage and Retrieval
 - 1620 Complex Conveyor Systems
 - 1900 Other Industrial Automation
- 2000 Specialized Control and Data Acquisition
 - 2100 Building Environment
 - 2111 Energy Conservation
 - 2112 Facilities Management and Security

2120 Other Environment Monitoring
2121 Air and Water Quality
2122 Auto Emissions
2200 Transportation
2210 Maritime
2220 Railroads
2230 Auto Traffic Control
2240 Air Traffic Control/Dispatch
2300 Simulation
3000 Communication
3100 Concentrator/Multiplexor
3200 Front End Processing
3300 GSD Communication Controller
3400 Message Switching
3500 Telephone Switching and Monitoring
3510 Switching
3520 Monitoring
4000 Transaction Processing
4100 Plant Floor Systems
4200 Industry Terminal Systems
4210 Hospital
4220 Banking
4230 Point of Sale
4290 Other Industry Terminals
5000 Business Data Processing
5100 Distributed Host Support
5110 Key Entry
5120 Remote Batch

5130 Combined RJE/KE Terminal Systems
5140 Peripheral Equipment Controller
5200 Distributed Processing - Host Dependent
5220 Multi-Functional Workstation Systems
5300 Standalone Business D. P.
5310 Distributed Business Processing - Large Account
5320 Business Systems - Small Account
6000 Scientific Computation
6100 Problem Solving
6110 Engineering/Scientific Applications
6120 Civil Engineering
6130 Timesharing Systems
6200 Instructional
6210 GAI
6220 Computer Lab
6230 Administrative/Education
7000 Graphics
7100 Graphic Arts
7200 Design and Drafting Automation
8000 Office Automation
8100 Text Processing
8200 Electronic Correspondence
8300 Administrative Document Storage and Retrieval
9000 Other Applications
9100 Government
9110 Government Known
9120 Government Classified
9200 Miscellaneous/Emerging New

IBM

12/77

I. OVERALL SCOPE OF WORK

A series of in depth personal interviews will be conducted by vendor professionals knowledgeable in both DDP and the industries being studied. These interviews will be structured at the enterprise level with sufficient interviews at both central and remote locations to allow a good understanding of DDP in that company now and as it appears to be evolving through 1986. Study resources will be split about equally between interviews of large (over 1000 employees) and small enterprises. The study will cover a broad range of industry segments.

DDP study objectives are:

1. To estimate the potential and all-vendor shipments (U.S.) for DDP systems through 1986 within several functional, application, and market structure parameters.
2. Within a defined market and application structure, determine the following through 1986

Overall User DDP Requirements (From Interviews)

Business/Economic Trends Affecting DDP Implementation

Key Motivators

Economics of DDP

Competition

Relationship of DDP to Enterprise Structure (From Interviews)
and Organization.

Interviewing will follow an interview guide with a large number of specific closed questions. A pre-test of about 10% of the entire project will be performed and evaluated by IBM and the vendor to assure maximum project value.

A sample list and sample distribution (by size and industry) will be provided to vendor who will randomly select from this list as augmented by additional qualified names known to vendor.

Number of enterprises interviewed should be between 100 and 150 but the limiting factor will be a budget of \$100,000.

Results will be presented both in a report and in an oral presentation.



II. SAMPLE STRUCTURE/SELECTION

Sample is to be drawn from Industry/Size cells per the attached chart (exhibit A). IBM will supply names and addresses of enterprises that meet the requirement of the equivalent of an IBM S/32 or Series/1 installed in the enterprise, plus some other specific cell-oriented requirements to be defined later. Vendor is free to add other qualified names of his choosing. Enterprises are to be selected randomly from the list regardless of IBM affiliation, location, installed base, sophistication, etc. Identity of individual respondent companies is not to be revealed to IBM nor is the IBM sponsor-ship of this work to be revealed to respondent.

Vendor will select an appropriate mix of locations to be interviewed within each enterprise to assure a comprehensive and representative coverage of the enterprise and its DDP activity. It is essential to obtain information on both IBM and non-IBM DDP systems.

III. TOPICAL OUTLINE FOR QUESTIONNAIRE

The attached (exhibit B) represents the key topics to be covered in the interview. Vendor will develop a detailed interview guide (questionnaire) to acquire the data required. This will be reviewed with IBM prior to first interviewing.

IV. APPLICATION AND DATA STRUCTURE

Exhibit C shows the basic structure for collection of DDP user data. For each DDP system identified, the system type, processing mode and application(s) are to be supplied in addition to other data shown on the outline.

Exhibit D lists the application structure to be used. Vendor and IBM will agree on some aggregate form of the applications. The list entitled "Application Structure" is mainly oriented toward mini-computers while the other is more a breakdown of general purpose computer applications.

V. RESULTS

1. Vendor will provide his projections for all-vendor potential and shipments through 1986. Attached are four examples of how data [might] be shown (exhibits EH). Shipments/potentials should be shown in units and dollars by 4 system price ranges (1977 dollars). See exhibit I for definition of potential and of DDP. Data should be presented by each industry/size cell and by year through 1986 (1977, 1980, 1983 and 1986 are adequate). Terminals and communications equipment should be shown as separate items.

See Cap
Val vs Pricel

Note!



56
28

2. Vendor will compile and analyze results from questionnaire and present these in tabular form where-ever possible along with appropriate discussion.
3. Vendor will present brief scenarios covering each industry/size cell giving key and unique findings.
4. Vendor will summarize all other pertinent findings.
5. Vendor will present the above material in both a written report and in an oral presentation in Atlanta.

VI. SCHEDULE

Work will begin upon signing of a contract on or before December 31, 1977. A pretest involving approximately 10% of the total interviews will be performed and reviewed by vendor and IBM. This work is to be completed by January 31, 1978. Vendor is asked to suggest ways for IBM to be present for or hear some of the initial interviews without violating the mutual anonymity of the work.

The remaining interviews are to be completed no later than March 31, with the written/oral presentations available by April 30.

VII. CONFIDENTIALITY

This RFP and its exhibits, sample lists, work product, used and unused questionnaires, and any other material provided by IBM as part of this study is to be treated as IBM Confidential and is to be returned to IBM without copying, at the end of this study.

VIII VENDOR RESPONSE TO THIS RFP

1. Any and all variations to the preceding specifications are to be itemized and explained including alternate suggestions.
2. A brief interview and project plan is to be given.
3. An estimate of the number of interviews (number of locations to be visited) is to be given considering the \$100,000 total project budget.
4. Vendor qualifications are to be given including names and resources of specific persons who will be principals on their project.
5. Response to be received no later than Tuesday, December 27, 1977.



IV TERMS

\$50,000 to be payable upon acceptance of vendor proposal. The remainder to be payable upon acceptance of work product.

EXHIBIT A-1

HOLMES 4000

FBM's *FBM's*

Muckill *Single Unit Enterprises* *n/a*

DDP SEG.	INDUSTRY CLASS	POT'L SEG'S	NAME	DDP SAMPLE STRUCTURE			GSD1	GSD2
				20- 99	100- 499	500+ 499		
1	*DA,1,4,6	14- 23	RET./WHLSL.	1/2 X	1/2 X	X	.6X	1/2 X 3/2 X
2	*D2,3,9	6-19, 25	CGM/APPAREL	1/2 X	X		.6X	~X 3/2 X
3	*P1-4,8	34,36, 38,40	PROCESS LESS P7	1/2 X	X		.6X	~X 3/2 X
4	*P7	37	PETROLEUM	1/2 X	X		.6X	~X 3/2 X
5	*M1-2	35	AERO/MOT VEH			X	~X ~X	6
6	*M3-5	35	MACH/FABRIC	1/2 X	1/2 X	X	.6X	~X ~X
7	F1-2,4	45,46	BANKS	1/2 X	1/2 X	X	.6X	~X ~X
8	E3	63	SEC.SCHOOLS	1/2 X	1/2 X		.6X	~X ~X
9	H1	55	HOSPITALS	1/2 X	1/2 X		.6X	~X ~X
10	G2-3	65-67	CITY/COUNTY GOVT	1/2 X	1/2 X	X	.6X	~X
11	T2	41	MOTOR FREIGHT	1/2 X	1/2 X			~X
APPROX. % OF BUDGET...				5	15	20	4	6
<u>Interviews:</u>				12-38-50	(10)	10-15	20-75	125
*- 1976 INDUSTRY ALIGNMENT; SERVICE INDUSTRY IS 1977								
				5	15	20	4	6
				S	I	S	20	30

5 15 20 4 6 20 30

Matrix of # of
Interviews by industry

NOV 1977



EXHIBIT A-2

DDP STUDY SIZE STRUCTURE

SEGMENT	(GSD1-<1000 EMPL)			** (GSD2->1000 EMPL)			(EMPLOYEE SIZE)
	3&4 SIZE	5&6 SIZE	7 SIZE	8 SIZE	9 SIZE		
1	20-99	100-499	500-999		1K-9999	10K+	
2	"	"	"		"	"	"
3	"	"	"		"	"	"
4	"	"	"		"	"	"
5	"	"	"		"	"	"
6	"	"	"		"	"	"
7*	10-50	50-500	500-999		1K-9.9K	10K+	(ASSETS-\$M)
8*	5-25K	25-50K	50K+(SCHOOL DISTRICT)	500-1999	2000+		(LARGE SCHOOL ENROLLMENT)
9*	100-299	300-499	500+	---NONE-----			(BEDS)
10*	5-25K	25-100K	100-250K	250-500K	500K+		(POPULATION)
11*	0-1	1-49	50-99	100+	---		(REVENUE-\$M)

* - THESE SEGMENTS USE INDUSTRY SPECIFIC SIZE MEASUREMENTS WHICH ARE SUBJECT TO MINOR CHANGES PRIOR TO STUDY START.

** - USES ENTERPRISE SIZE (LIKE GSD1) RATHER THAN ESTABLISHMENT SIZE.

NOV 1977

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DDP STUDY
TOPICAL OUTLINE

8

I. DEMOGRAPHICS

- TYPE ACTIVITY AT LOCATION
- ENT SIC/SIZE (EMPL. + IND. SPECIFIC)
- ESTAB. SIC/SIZE (EMPL. + IND. SPECIFIC)
- COMPANY ORGANIZATION (FUNCTIONAL/GEOGRAPHIC)
- RESPONDENT FUNCTIONAL AREA/GEOG. AREA

II. INSTALLED BASE AT ESTAB. (ENT.)

- ALL SYSTEMS (MAKE/MODEL) (WHEN INSTALLED)
- MAJOR APPLICATIONS

~~DDP = ②~~ RELATIONSHIP TO OTHER SYSTEMS (any other file in office)
~~DDP - GENERAL~~ Prog. Control

- RESPONDENT DEFINITION OF DDP
- DOING DDP NOW? IN FUTURE?

IV. DDP USERS

- WHAT DDP SYSTEMS INSTALLED/PLANNED?
- HARDWARE INCLUDING TERMINALS
- DISPERSIONS OF SYSTEM (FUNC./GEOGR./ORGANIZ.)
- ~~②~~ DATA BY (MATRIX) ✓
- JUSTIFICATION: WHY DDP?
- PREVIOUS METHOD (S)
- DATA BASE DISTRIBUTION
- COMMUNICATION: SPEEDS, VOLUMES, DISCIPLINE, ETC.
- PERSONNEL
- MAINTENANCE

- ✓ SOFTWARE: SOURCE, MAINT., LANG., DBMS, ETC.
- ✓ SATISFACTION / PROBLEMS
- ✓ DECISION MAKING
- ✓ VENDOR SELECTION CRITERIA (E.G. PRICE, T/C, COMPATIBILITY)

~~DATA SECURITY NEEDS~~ → DATA SECURITY NEEDS *as per. by Mr.*

- ✓ HOW IDENTIFICATION
- ✓ TERMINAL KEY LOCK ?
- ✓ COMMUNICATIONS ENCRYPTION
- ✓ "SECONDARY" STG. ENCRYPTION *(e.g. Disk D.B.)*
- ✓ SECURITY JOURNALLING FOR AUDIT TRAIL - ?

~~FUTURE TRENDS FOR DDP~~

- ✓ KEY FACTORS AND WHY (INCLUDE TIMING)

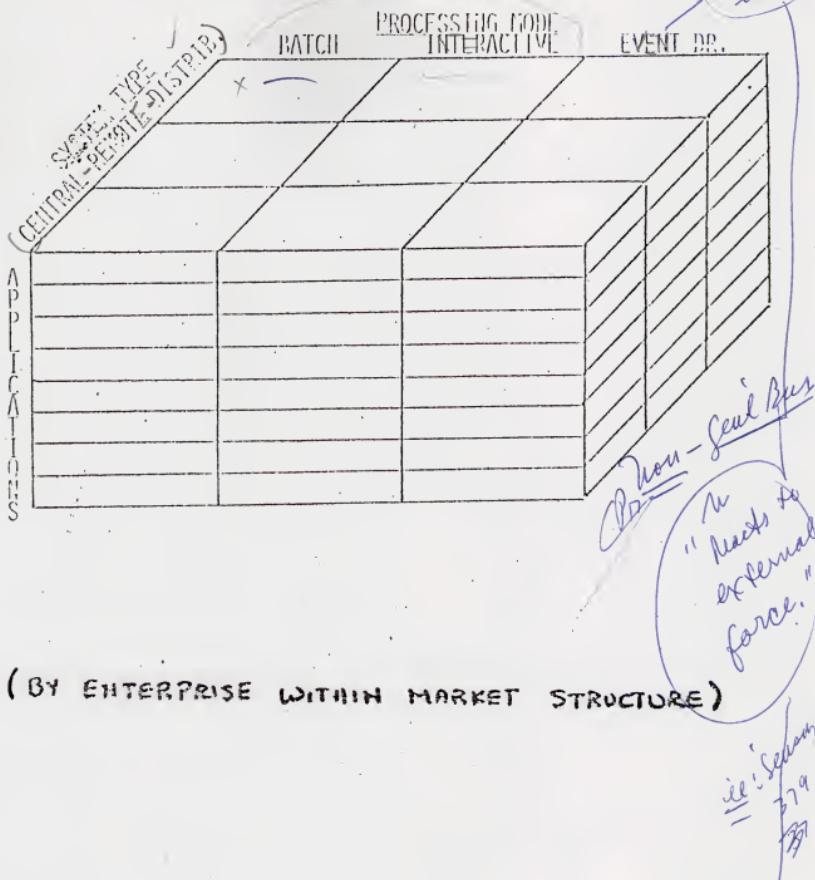
~~NON-DDP USERS~~

- ✓ WHY NOT ?
- ✓ WILL YOU IN THE FUTURE ?
- ✓ WHY ? WHY NOT ?
- ✓ WHAT NEEDED? WHAT APPLICATIONS?
- ✓ WHO IMPLEMENT?

~~AWARENESS OF IBM?GSD PRODUCTS~~

- SPECIAL INDUSTRY QUESTIONS
- OTHER REQUIREMENTS AND COMMENTS



DATA PRESENTATION

"W"

APPLICATIONS LIST

SELECT FROM THIS LIST FOR THE FIRST COLUMN OF THE TABLE ON THE NEXT PAGE.
START WITH "COMMON APPLICATIONS" FOR ALL INDUSTRIES

COMMON APPLICATIONS	
1.	Billing
2.	Inventory Accounting/Control
3.	Accounts Receivable
4.	Sales Analysis
5.	Order Entry
6.	Payroll and Labor Distribution
7.	Accounts Payable
8.	General Ledger
9.	Cost Accounting
10.	A/c Costing
11.	Purchase Order Writing
12.	Receiving
13.	Shipping
14.	Personnel Records
15.	Fixed Asset Accounting
16.	Facilities/Equipment Maintenance
17.	Budgets Administration
18.	Tax and Govt. Reporting
19.	Stockholder Records
20.	Mailings/Mailing Lists
21.	Data Services/Other Companies
22.	Math/Statistician Analysis
23.	Word Processing
24.	Engineering/Research/Advanced Math. Computing
25.	Remote Job Entry

DISTRIBUTION	
26.	Route Accounting
27.	Top Deck/Trunk/Reservation
28.	Order Allocation
29.	Store Replenishment
30.	Ship/Pack Labels
31.	Credit Authorization
32.	Cash Management
33.	Sales Audit
34.	Other Distribution Applications

EDUCATION	
35.	Computer Education
36.	Student Problem Solving
37.	Computer Assisted Instruction
38.	Student Records
39.	Grade/Marks Reporting
40.	Student Scheduling
41.	Attendance Accounting
42.	Admissions Registration
43.	Alumni Records
44.	Fund Raising
45.	Census
46.	Student Activities
47.	Student Financial Aid
48.	Supplies Inventory
49.	Other Education Applications

FINANCIAL	
50.	Deposits/Deposit Accounting
51.	Saving/Life/Retirement Accounting
52.	Consumer Loans
53.	Mortgage Loans
54.	Commercial Loans
55.	Proof of Deposit
56.	Trust
57.	Personal Trust
58.	Corporate Trust
59.	Customer Information Systems

FINANCE (continued)

- 60. Investment Management
- 61. On Line Teller System
- 62. Correspondent Bank Services
- 63. Other Finance Applications

GOVERNMENT

- 64. Elections and Registration
- 65. Document Retrieval
- 66. Bill Status/Index/Retrieval
- 67. Appropriation Accounting
- 68. Income Tax
- 69. Property Tax
- 70. Other Tax
- 71. Licensing
- 72. All Other Revenue Accounting
- 73. Traffic Citation Processing
- 74. Welfare and Social Assistance
- 75. Vehicle Registration
- 76. Other Government Applications

HOSPITALS AND HEALTH

- 77. Third Party Claims
- 78. Admissions and Discharge
- 79. Patient Identification
- 80. Bed Utilization/Census
- 81. Medical Records and Statistics
- 82. Automated Patient Records
- 83. Laboratory Reporting
- 84. Medicare Cost Allocation
- 85. Supplies Inventory
- 86. Cafeteria/Menu
- 87. Other Health Applications

HOTELS AND MOTELS

- 88. Front Office
- 89. Back Office
- 90. Reservations

INSURANCE

- 91. Life Maintenance
- 92. Policy Accounting
- 93. Commodity Accounting
- 94. Policy Issue/Benevolts
- 95. Claim Processing
- 96. Policyholder's Services
- 97. Actuarial and Statistical
- 98. Agency Accounting
- 99. Reinsurance Administration
- 100. Other Insurance Applications

LEGAL

- 101. Time Accounting
- 102. Disbursement Accounting

PUBLIC ACCOUNTING

- 103. Credit Accounting
- 104. Time Accounting

MANUFACTURING

- 105. Bill of Material Maintenance
- 106. Engineering and Production Data
- 107. Demand Forecasting
- 108. Order Tracking and Inquiry
- 109. Materials Requirements Planning
- 110. Inventory Management/Accnts
- 111. Shop Scheduling

MANUFACTURING (continued)

- 112. Order Release
- 113. Shop Scheduling
- 114. Material/Move Control
- 115. Stock Inventory Control
- 116. Product Costing/Estimating
- 117. Equipment Acq./and Location - Control
- 118. Project Management and Control
- 119. Cash Management
- 120. Numeric Controlled Tools
- 121. Time and Attendance
- 122. Shop Floor Data Collection
- 123. Other Manufacturing Applications

MEDIA

- 124. Classified Advertising
- 125. Media Analysis
- 126. Broadcasting Log
- 127. Other Media Applications

REAL ESTATE

- 128. Property Management
- 129. Listings and Sales

SECURITIES

- 130. P & G
- 131. Stock Record/Dividends
- 132. Quotes
- 133. Bookkeeping/Statements
- 134. Name and Address Maintenance
- 135. Margin and Cash Accounting
- 136. Portfolio Valuations
- 137. Commission Analysis
- 138. Portfolio Applications
- 139. Mutual Fund Accounting
- 140. Fund Trading Accounting
- 141. Commodity Accounting
- 142. Options Accounting
- 143. Other Securities Applications

MOTOR FREIGHT

- 144. Freight Bill Entry
- 145. Interline Payables
- 146. Shipment Analysis
- 147. Owner/Operator Accounting
- 148. Rate Analysis
- 149. Equipment Inventory
- 150. Other Motor Freight Applications

RAILROADS

- 151. Revenue Accounting
- 152. Car Accounting
- 153. Freight Underway Accounting
- 154. Other Transportation Applications

TELECOMS - COMMUNICATIONS

- 155. Customer Records
- 156. Dispatch Accounting
- 157. Materials Management

TELECOMS - POWER

- 158. Customer Records
- 159. Revenue Accounting
- 160. Materials Management

S1, S32

"V"

C

"L" NBBM 450
1. APPLICATION STRUCTURE (oriented → units)

Functional
or

- (a) 1000 INDUSTRIAL AUTOMATION
- 1100 PROCESS CONTROL
- 1110 CONTINUOUS PROCESSES
- 1120 BATCH PROCESSES (ie: Dye)
- 1200 TEST AND INSPECTION
 - 1210 ELECTRICAL TEST AND INSPECTION
 - 1220 OTHER TEST AND INSPECTION
- 1300 PRODUCTION MONITORING
- 1400 DISCRETE PIECE MANUFACTURING
 - 1410 METALWORKING MACHINE CONTROL (CNC, DNC)
 - 1420 OTHER METALWORKING EQUIPMENT
 - 1430 ELECTRONIC PRODUCTION EQUIPMENT
 - 1440 NON-METALWORKING EQUIPMENT
 - 1450 H.C. TAPE PREPARATION
- 1500 ANALYTICAL LABORATORY SYSTEMS
 - 1510 LAB AUTOMATION
 - 1520 INSTRUMENT AUTOMATION
 - 1530 EXPERIMENT MONITORING
- 1600 MATERIALS HANDLING
 - 1610 AUTOMATIC STORAGE AND RETRIEVAL
 - 1620 COMPLEX CONVEYOR SYSTEMS
- 1900 OTHER INDUSTRIAL AUTOMATION

[S1
Applications]

"L"



2000 SPECIALIZED CONTROL AND DATA ACQUISITION
2100 BUILDING ENVIRONMENT
2111 ENERGY CONSERVATION
2112 FACILITIES MANAGEMENT AND SECURITY
2120 OTHER ENVIRONMENT MONITORING
2121 AIR AND WATER QUALITY
2122 AUTO EMISSIONS
2200 TRANSPORTATION
2210 MARITIME
2220 RAILROADS
2230 AUTO TRAFFIC CONTROL
2240 AIR TRAFFIC CONTROL/DISPATCH
2300 SIMULATION
3000 COMMUNICATION
3100 CONCENTRATOR/MULTIPLEXOR
3200 FRONT END PROCESSING
3300 GSD COMMUNICATION CONTROLLER
3400 MESSAGE SWITCHING
3500 TELEPHONE SWITCHING AND MONITORING
3510 SWITCHING
3520 MONITORING
4000 TRANSACTION PROCESSING
4100 PLANT FLOOR SYSTEMS



4200 INDUSTRY TERMINAL SYSTEMS

4210 HOSPITAL

4220 BANKING

4230 POINT OF SALE

4290 OTHER INDUSTRY TERMINALS

5000 BUSINESS DATA PROCESSING

5100 DISTRIBUTED HOST SUPPORT

5110 KEY ENTRY

5120 REMOTE BATCH

5130 COMBINED RJE/KE TERMINAL SYSTEMS

5140 PERIPHERAL EQUIPMENT CONTROLLER

Any lower cap?
w/Apple?

5200 DISTRIBUTED PROCESSING - HOST DEPENDENT

5220 MULTI-FUNCTIONAL WORKSTATION SYSTEMS

5300 STANDALONE BUSINESS D.P.

5310 DISTRIBUTED BUSINESS PROCESSING - LARGE ACCOUNT

5320 BUSINESS SYSTEMS - SMALL ACCOUNT

6000 SCIENTIFIC COMPUTATION

6100 PROBLEM SOLVING

6110 ENGINEERING/SCIENTIFIC APPLICATIONS

6120 CIVIL ENGINEERING

6130 TIME SHARING SYSTEMS

6200 INSTRUCTIONAL

6210 CAI

6220 COMPUTER LAB

6230 ADMINISTRATIVE/EDUCATION

covered
onother
list

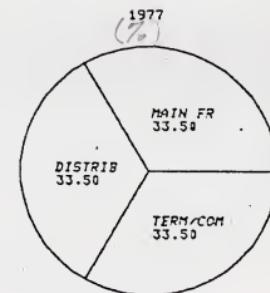
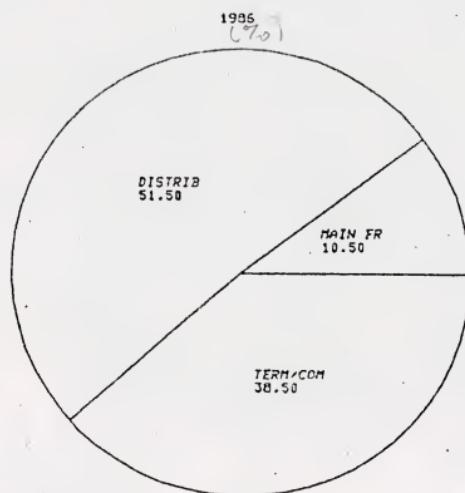


7000 GRAPHICS
7100 GRAPHICS ARTS
7200 DESIGN AND DRAFTING AUTOMATION
8000 OFFICE AUTOMATION
8100 TEXT PROCESSING
8200 ELECTRONIC CORRESPONDENCE
8300 ADMINISTRATIVE DOCUMENT STORAGE AND RETRIEVAL
9000 OTHER APPLICATIONS
9100 GOVERNMENT
9110 GOVERNMENT KNOWN
9120 GOVERNMENT CLASSIFIED
9200 MISCELLANEOUS/EMERGING NEW
~~-----~~

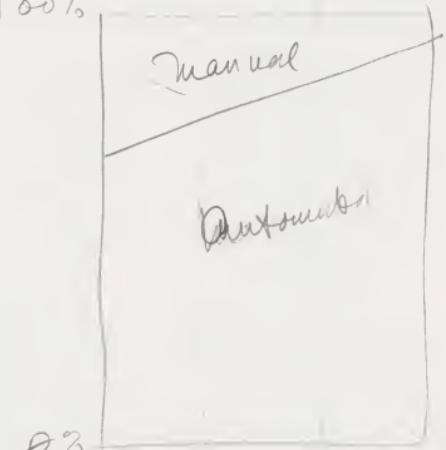
EXHIBIT EDDP STUDY- ALL VENDOR SHIPMENTSLEGEND:

DISTRIB = DDP SYSTEMS

MAIN FR = NON-DDP SYST.

TERM/COM = NON-INTEL,
TERMINALS AND
OTHER COMMUN.
EQUIP.

100%

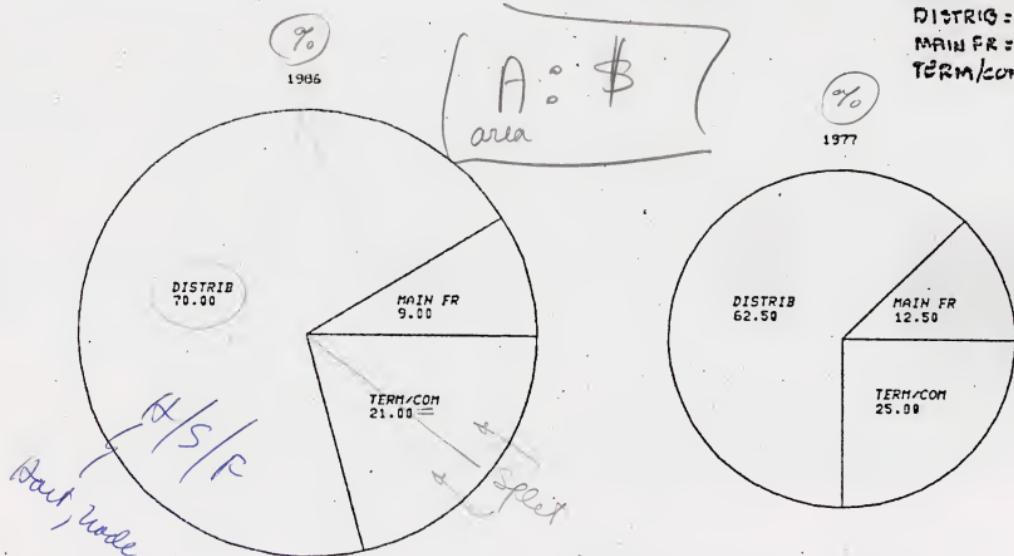


\$

per application!

EXHIBIT F

DDP STUDY- ALL VENDOR POTENTIAL

LEGEND:

DISTRIB: DDP SYSTEMS
MAIN FR: NON-DDP SYST.
TERM/COM: NON-INTEL.
 TERMINALS AND
 OTHER COMM.
 EQUIP.

- ✓ Term: Dumb w/o line; modems
- ✓ Comm: modems, line, comm. (plug on term. to plug on host)

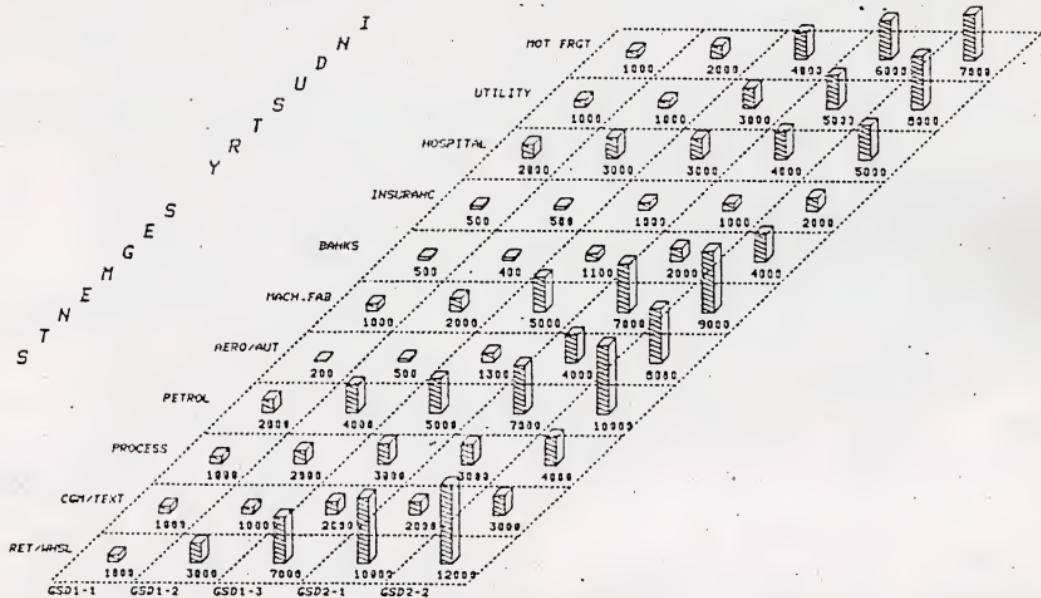
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EXHIBIT G

1985 MINICOMPUTER SHIPMENTS IN DDP ENVIRONMENT



ENTERPRISE SIZE

EXAMPLE ONLY

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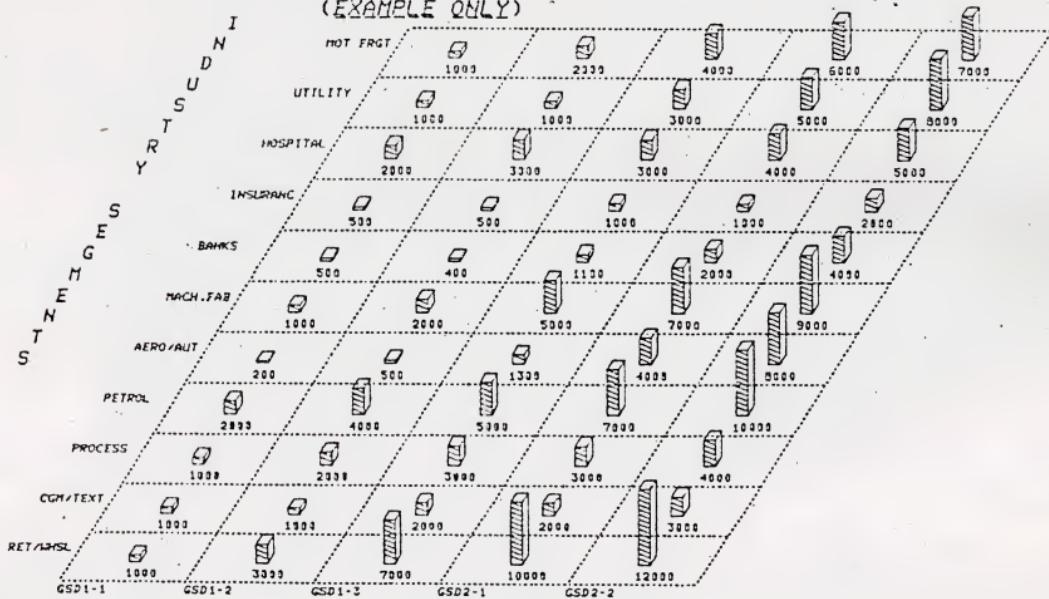
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EXHIBIT H

1986 MINICOMPUTER SHIPMENTS IN DDP ENVIRONMENT

(EXAMPLE ONLY)



ENTERPRISE SIZE



DEFINITIONS

1. Distributed Data Processing (DDP).

"A data processing technique whereby multiple interrelated systems are deployed along organization, functional, or geographic lines."

2. Potential

"An expression of demand for a proposed 'state-of-the-art' product function solution to a business opportunity in terms of population, units, revenue, etc."

"Business needs and economic justifications are considered. There are no market constraints (user attitudes, ability to install, etc.) or vendor constraints (availability of the product, adequate marketing coverage, etc.) applied."



**PROPOSAL FOR A STUDY OF
DISTRIBUTED DATA PROCESSING**

December 23, 1977

SUBMITTED TO:

IBM CORPORATION
General Systems Division
Atlanta, GA

In Response To:

RFP No. RSM-006

SUBMITTED BY:

INPUT
2180 Sand Hill Road
Menlo Park, CA 94025
(415) 854-3422

INPUT



OBJECTIVES

INPUT proposes to carry out a study of Distributed Data Processing (DDP) on behalf of the IBM Corporation. The principal objectives of the study are:

- To estimate and forecast the potential market for DDP systems through 1986 within functional, application and market/industry structure parameters as defined in the RFP.
- Within each "cell" of the defined market structure, INPUT will determine:
 - Overall user requirements that can be well satisfied by DDP.
 - Business and economic external and internal factors that could impact DDP implementation.
 - Factors motivating or inhibiting potential DDP buyers and/or users.
 - DDP economics.
 - Competitive environment.
 - Relationship of DDP to enterprise structure and organization.



SCOPE OF THE STUDY

- The study as proposed provides for coverage of approximately 125 enterprises, based on an average of two in-person interviews for each enterprise. This number could be smaller or greater depending on actual interviewing efficiency. As shown in Exhibit I, the limiting factor is the man day allocation. INPUT has assumed that two interviews can be completed per man day.
- The sample distribution will be shown to correspond to the industry/size cells as specified in the RFP. Names of prospective interviewees will be drawn from IBM supplied lists as well as INPUT's own data bank of interview prospects.
- All enterprises interviewed will be located within the continental United States. However, it is presumed that the data structure and interviewing formats will be easily extended to overseas study at some future date.
- Although INPUT accepts the industry breakdown as specified in the RFP, INPUT recommends that the Power Utilities industry be included because a priori estimates perceive this sector as one of high potential for DDP. If Utilities is added to the list, INPUT recommends dropping the Hospital group.
- The final details of the questionnaire(s) will be determined by IBM at an initial planning meeting with key INPUT personnel. INPUT takes no exception to the items listed in Exhibit B of the RFP, but recommends the inclusion of other issues, some samples of which are:
 - Maintenance Responsibility.
 - Sales vs. Lease vs. Rent.
 - Hardware vs. Software vs. Firmware.
 - User Dedication vs. SNA.



EXHIBIT I
DISTRIBUTED DATA PROCESSING STUDY
PROJECT SCHEDULE AND MANPOWER LOADING

TASK	WEEK ENDING															MAN-DAY EST.	
	1/6	1/13	1/20	1/27	2/3	2/10	2/17	2/24	3/3	3/10	3/17	3/24	3/31	4/7	4/14	4/21	4/28
START-UP PHASE	▲	▲															5
INITIAL INTERVIEWS	▲			▲													12
ANALYZE PRE-TEST RESULTS				▲	▲												3
PREPARE FOR & HOLD INTERIM REVIEW MEETING					▲	▲											4
MAIN INTERVIEW PROGRAM						▲								▲			110
DATA TABULATION AND FORECASTS							▲	▲			▲	▲		▲			16
ANALYSIS & FINAL REPORT									▲	▲				▲			23
PREPARATION/DELIVERY OF PRESENTATION														▲	▲		4
															TOTAL	→	177



- Compatibility/Interfacing Requirements.
- Importance of Vendor Viability to DDP Users.
- Identification of User "Hot Buttons."
- Impact of Satellite Communications.
- Influence of Office Products and Electronic Mail.
- Standardization vs. Uniqueness (e.g., must standards be established for DDP to be accepted.)
- Users' Views of IBM Today (e.g., what is the effect of GSD and DDP sales personnel calling on the same customer for the same application).

- Other than the preceding comments, INPUT accepts the scope of the study as given in the RFP in toto.



METHODOLOGY

The project plan milestone schedule is given in Exhibit I. A reading of this chart shows that the project is organized into a series of discrete steps described as follows:

- **STEP I: START-UP PHASE**

Mssrs. Mantell and Tyler will meet with IBM personnel early in January in order to:

- Refine the project plan and forecasting methodology.
- Layout and detail the questionnaires to be used for the user interviews.
- Identify the populations that will be sampled for the interviews.

At the conclusion of Step I, IBM and INPUT will have reached agreement on all specifications for the project.

- **STEP II: INITIAL INTERVIEWS**

INPUT will interview approximately 10-15 enterprises (20-30 actual interviews) as a pretest of the efficiency of the questionnaires. During these interviews, INPUT staff will request permission to tape the conversation in order that IBM may review the proceedings.

- **STEP III: ANALYZE PRETEST RESULTS**

INPUT will tabulate and analyze the information gathered in Step II and prepare a brief commentary on the results obtained.



- STEP IV: INTERIM REVIEW

The results obtained in Step II together with INPUT's recommendations for subsequent research will be presented to IBM at an interim meeting scheduled to be held in the first week of February. At the conclusion of this meeting, it is presumed that any indicated refinement of the interviewing methodology will be accomplished and that INPUT will be fully prepared to proceed with the balance of the interviews.

- STEP V: MAIN INTERVIEW PROGRAM

INPUT will interview approximately 110 enterprises (220 location interviews) using the refined questionnaires. Insofar as possible, interviews will be assigned to senior individuals on the basis of their familiarity with particular industry sectors. These assignments are reflected in the staffing plan discussed in this proposal.

- STEP VI: DATA TABULATION AND FORECASTS

INPUT personnel will compile and tabulate all of the data and information collected in the interviewing program. From this data, coupled with information from other sources, INPUT will develop forecasts for the years 1977, 1980, 1983 and 1986 for potentials and all-vendor shipments for each category specified in the RFP.

"Other source" information will include data and forecasts accumulated by INPUT in association with other projects, some of which are described in the qualification section of this proposal. Also included will be industry or general economic data supplied by government, standard industry associations, or other economic institutions. At IBM's option, internal IBM industry growth forecasts could be used in addition to or in place of data from other sources.



The forecasting methodology is outlined as follows:

1. Using 1977 as the base year, the amount of dollars expended for each application within each industry will be established.
2. Applying industry growth data, information gathered from these interviews, and interviews from INPUT's other projects, the 1977 data will be extrapolated through 1986.
3. For each cell derived in (2), INPUT will estimate the percentage of those dollars that will flow through to all automated solutions. These estimates will be based on the interview data plus other appropriate and available information sources. This data will then represent what IBM has called "All-vendor potential" for all solution methods taken together.
4. For each cell derived in (3), INPUT will estimate the breakdown between DDP, non-DDP systems, and non-intelligent terminals and communications equipment. This data will correspond to that designated in Exhibit F of the RFP as "All-vendor potential" for each solution method.

In estimating this breakdown for years beyond 1977, INPUT will provide a "technology displacement" analysis in which estimates of the price/performance differential between DDP and conventional approaches will be quantified in each of the forecast years. The analysis procedure is one used by INPUT in its recent study "Economics of Computer/Communications Networks" (to which IBM has subscribed). In this study, INPUT analyzed the costs associated with displacing multiple stand-alone EDP installations with a hierarchical network configuration.



5. The last step of the forecasting methodology will be to estimate the penetration rates for DDP and the alternative approaches for each of the forecast years. The estimates will be based on the user-perceived level of acceptance of DDP which will be derived directly from the interview program. The product of these rates and the "potential" data will give the shipment forecasts as proscribed in Exhibit E of the RFP.
- STEP VII: ANALYSIS AND FINAL REPORT

The INPUT staff will analyze all data, forecasts and qualitative information collected in the interview program and prepare a report summarizing the results and presenting INPUT's conclusions and recommendations to IBM.

The core of the report will be built around scenarios established for each industry/size group. Scenarios will be supported by presentations of all pertinent data and forecasts plus qualitative assessments formulated from the interviews. Each industry section of the report will be written by the INPUT staff member who conducted the bulk of the interviews in the particular sector examined in order to obtain as much of a "first-hand" presentation as possible.
- STEP VIII: PRESENTATION

The INPUT staff will prepare an all-day formal presentation highlighting the results of the study. The presentation will be delivered at a time and place to be established by IBM. The presentation will be given by Mssrs. Mantell and Tyler.



ALTERNATIVE INTERVIEW PROGRAM

- INPUT believes that IBM will obtain greater benefit for its allocated funds from a larger sample than that suggested in the RFP. The only way to accomplish that within the stated budget is to substitute telephone interviews for in-person interviews.
- Accordingly, INPUT recommends that IBM consider altering the project specification to displace one-half of the in-person interviews with telephone interviews. This would provide coverage of approximately 200+ enterprises assuming that 2.5 telephone interviews substitute for one in-person interview.

SUPPORT FROM IBM

The time estimate given in Exhibit I presumes that INPUT will tabulate and analyze the data using essentially manual techniques. If IBM can support the data reduction process with any of its internal automated systems, time may be saved in this step.

Should this be the case, the man days that INPUT would save could then be devoted to conducting more interviews.



STAFFING AND PROJECT ORGANIZATION

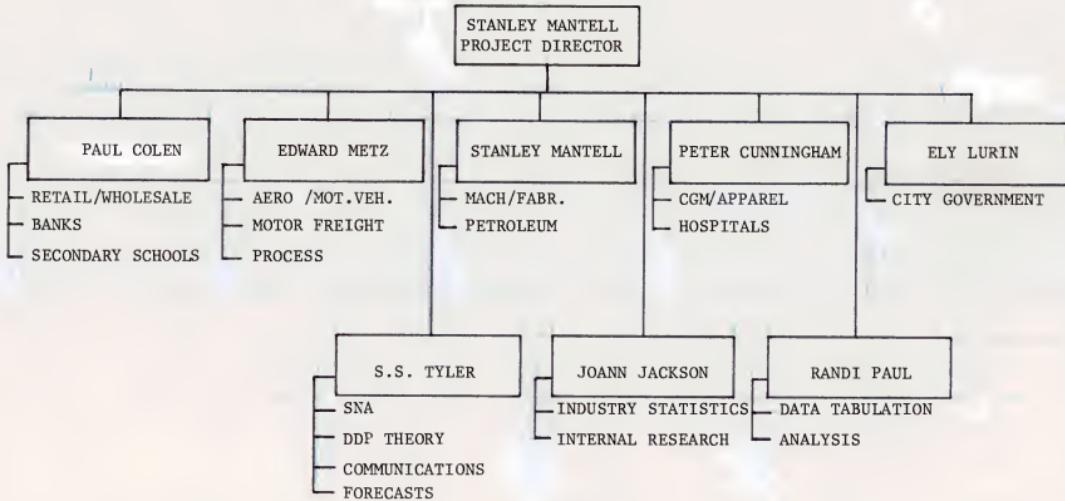
- The staff organization for the DDP study is shown in Exhibit II. The assignment depicted in this organization chart were selected because of the specific skills or industry familiarity of the individuals.
- INPUT intends that each individual assigned to a particular industry group will largely be responsible for all interviewing done within that group. However, where it is especially convenient to reduce time or travel costs, some geographic allocation will be made.
- Brief biographical sketches of the senior INPUT staff assigned to this project are as follows:

STANLEY MANTELL is Vice President of INPUT and has more than 25 years of industry experience which includes 3 years as Vice President and General Manager of Ampex¹ Data Products Division, 4 years as Vice President of Operations for Singer Business Systems, and 3 years as General Manager of Royal-McBee (Holland). He was also co-founder and President of Qantel, a manufacturer of small business systems. Mr. Mantell has a B.S. from Syracuse University.

Recent INPUT Projects:

- IBM Scenarios
- Data Base Management Engine
- IBM Series/I
- Impact of Small Business Computers on Services
- Discrete Manufacturing Industry

EXHIBIT II
DISTRIBUTED DATA PROCESSING STUDY
PROJECT ORGANIZATION



INPUT



S.S. (TIM) TYLER is a Senior Consultant with 26 years experience in industry. Prior to becoming a consultant in 1976, Mr. Tyler was a Vice President of the Singer Company and held the positions of Director, Corporate Systems and Director of Advanced Development responsible for the planning and development of advanced distributed data processing networks and systems. For 10 years, he was with IBM as Manager of Processing Resources, responsible for the design and implementation of OS enhancements. Mr. Tyler has a B.S. from the University of Maryland.

Recent INPUT Projects:

- Realities of Distributed Processing
- Data Base Management Processing
- Data Base Management Engine
- Economics of Computer/Communications Networks
- Plug Compatible Mainframes
- IBM Scenarios

PETER A. CUNNINGHAM is INPUT's founder and President and will be the Program Director for the COMPUTER & COMMUNICATIONS USER PLANNING SERVICE. Before founding INPUT in 1974, Mr. Cunningham was Director of the Computer Services department at Quantum Science Corporation. He spent 14 years in management and computer consulting in the U.S. and Europe, and was President of a successful software firm for several years. Mr. Cunningham has a B.Sc. from Imperial College, London, and an M.P.A. from the American University in Washington, D.C.

Recent INPUT Projects:

- 1977 Annual Report on Computer Services Industry
- EDP Plans & Budgets for 1977
- Performance Measurement Systems
- Health Services

ELY S. LURIN has over 20 years experience in data processing with a heavy emphasis on communications. He was co-founder and Vice President of Engineering for COMBYTE, a manufacturer of data communication systems, and has held a number of technical and management positions at Honeywell and Sperry-Rand. Mr. Lurin has a B.S.E.E. from M.I.T., an M.S.E.E. from the University of Pennsylvania and an M.B.A. from Wharton. Mr. Lurin is in charge of INPUT's Eastern Operations and has recently been project director of an INPUT study dealing with Value Added Networks.

PAUL COLEN is a Senior Consultant with more than 25 years experience. Prior to joining INPUT, Mr. Colen was President of his own consulting firm, Advanced Management Systems, Inc., a firm specializing in computer utilization for financial and economic planning. In 1968, Mr. Colen founded The Corporation for Information Systems Research and Development which was acquired in 1973. He also held a number of technical and management positions with Burroughs and Honeywell. Mr. Colen has a B.S. and M.S. from Northwestern University and an M.S. in Business Economics from Claremont Graduate School.

Recent INPUT Projects:

- . Economic & Financial Data Bases
- . Correspondent Banking Industry
- . Savings & Loan Industry
- . Bank Trust Department Applications

EDWARD I. METZ recently joined INPUT as a principal consultant and has established a new office in New Jersey. Mr. Metz brings more than 20 years of continuous industry experience to the firm. Most recently, he served as Director of Corporate Development for Automatic Data Processing. Prior to that he was a founder and Vice President of Cyphernetics until that firm was acquired by ADP. His earlier career included various technical and planning positions within the Ford Motor Company and Philco-Ford. He holds a B.A. from St. Joseph's College.



QUALIFICATIONS

- INPUT is extremely well-qualified to carry out the assignment described in this proposal. In recent months, the company has carried out or has in progress over 20 projects, some aspects of which bear on the topic of distributed data processing. Some of the topics covered in this recent work are mentioned briefly as follows:
- REALITY OF DISTRIBUTED PROCESSING

This project is presently underway in connection with INPUT's "Market Analysis Service." Issues being addressed in the study include:

- Economic trade-offs of large central mainframes vs. distributed intelligence.
- Types of DDP systems now installed or committed.
- Perceived payoffs on existing and planned systems.
- Competition to and from computer services.
- Compatibility problems and solutions.
- AT&T and IBM Scenarios.
- Impact of corporate organization on DDP.



- IBM SCENARIOS/IMPACT ON REMOTE COMPUTING SERVICES

In this project, INPUT postulated a series of scenarios regarding IBM's position in the data processing and communications industry ten years out, and examined the impact of each scenario on remote computing services.

- PLUG COMPATIBLE MAINFRAMES: NEW HARDWARE ECONOMICS

In this study, INPUT analyzed the impact of new product introductions by Amdahl, ITEL, and CDC upon IBM's large mainframe business.

- DATA BASE MANAGEMENT SYSTEMS SERVICES

This project examined the market outlook for remote computer services offerings based on the use of Data Base Management Systems. These services are expected to exert a strong competitive influence on the development of the DDP concept.

- DATA BASE MANAGEMENT ENGINE

This study analyzed the utility of a hardware implemented relational data model based system in DDP and non-DDP environments.

- ECONOMICS OF COMPUTER/COMMUNICATIONS NETWORKS

This study analyzed the economic trade-offs of multiple stand alone installations in comparison to hierarchical network structures.

- EDP PLANS & BUDGETS, 1977

This study analyzed the short term (1 year) plans of 125 large company EDP departments. Several DDP installations in place or in the planning stage were identified.



- VALUE ADDED NETWORK SERVICES (VANS)

This multiclient study, now nearing completion, deals with the future of VANS. Such services will have a significant impact on the development of DDP because they will address such problems as hardware compatibility and will reduce communications costs.

- THE IBM SERIES/I

In this study, INPUT forecasts that the new Series/I will have a significant impact on the minicomputer industry and will eventually become a key element in IBM's concept of DDP.

- INDUSTRY STUDIES

INPUT has carried out several vertical industry studies in the past two years and has others in progress. In the course of doing each industry study, questions dealing with the use of minicomputers and, by inference, DDP were included. Industries covered include:

- Health Services	- Utilities
- Discrete Manufacturing	- Wholesale
- Petroleum	- Food Processing
- Savings & Loan	- Engineers/Architects
- Banks	- Accountants/Lawyers

- All INPUT projects rely heavily on direct interviews as the primary source of information. INPUT has compiled over 1,000 questionnaires in 1977 alone and can draw on this base for information in support of the DDP study. These questionnaires will also substantially assist INPUT to select appropriate interview candidates for the DDP study proposed herein.

CONFIDENTIALITY

- All material associated with the project will be treated as proprietary and confidential to IBM as provided for in the RFP. Attached to this proposal and made a part of it are the INPUT/IBM confidentiality agreement and a copy of INPUT's standard employment agreement form which is signed by all employees.

FEE AND PAYMENT TERMS

- The fee for the study as proposed is \$100,000. Of this amount \$20,000 has been allocated for travel, telephone, report preparation, and other out-of-pocket expenses. Should actual expenses exceed this amount, IBM will be expected to reimburse INPUT for the excess over \$20,000 up to a maximum of \$10,000.
- Of the total fee, \$50,000 is due upon authorization of the project. The balance plus expenses will be due upon completion.

DISTRIBUTED DATA PROCESSING STUDY

AUTHORIZATION

IBM Corporation hereby authorizes INPUT, a California corporation, to proceed with the work as specified in IBM's RFP No. RSM-006 and INPUT's proposal issued in response to that RFP.

Terms and conditions regarding payments and confidentiality are to be as provided for in the proposal.

AUTHORIZED BY:

ACCEPTED BY:

INPUT





International Business Machines Corporation

P.O. Box 2150
Atlanta, Georgia 30301
404/231-3000

December 16, 1977

Input, Inc.
2180 Sand Hill Road
Suite 320
Menlo Park, CA 94025

Gentlemen:

Subject: Confidential Disclosure Agreement #294

International Business Machines Corporation (hereinafter called IBM) may wish to obtain quotations from and/or to issue to Input, Inc. (hereinafter called Seller) IBM purchase orders and/or contracts for market research. In connection therewith it may be necessary for IBM to disclose to Seller confidential information of IBM.

As a preliminary basis for such details, Seller is requested to enter into this Agreement having the following terms and conditions:

1. IBM may disclose IBM confidential information to Seller either orally or in writing (including graphic material). When disclosed in writing, the information will be labeled "IBM CONFIDENTIAL". When disclosed orally, such information will be identified as "IBM CONFIDENTIAL" at the time of disclosure, with subsequent confirmation in writing referencing the data and type of information disclosed. Seller agrees to clearly label as "IBM CONFIDENTIAL" all information reduced to writing by Seller as a result of such oral disclosures.
2. Seller shall hold in trust and confidence for IBM all IBM confidential information and Seller shall not disclose to any other person or use such information for any purpose other than to prepare a response to any IBM Request for Quotation or to perform work for IBM as may be subsequently ordered. Seller shall not make any copies of IBM confidential information. If copies are necessary, Seller shall request them from the IBM purchasing representative. It is to be understood that by disclosing this information to Seller, IBM does not grant any express, implied or other license or right to Seller under patents of IBM.

3. IBM confidential information shall mean all information identified as confidential and disclosed by IBM to Seller or obtained by Seller from IBM which relates to IBM past, present or future research, development or business activities.
4. Seller shall not disclose confidential information to subcontractors nor subcontract any part of the work covered by purchase orders issued by IBM without first obtaining written consent from IBM.
5. Seller's obligations regarding IBM confidential information shall not apply to information which was already known to Seller prior to disclosure of it to Seller by IBM, which is or becomes publicly available, which is rightfully received by Seller from third parties without accompanying secrecy obligations, which is independently developed by Seller or which is approved in writing by IBM for Seller to release.
6. Seller shall disclose IBM's confidential information only to Seller's employees having a need-to-know and shall segregate such information at all times from the confidential material of others so as to prevent any commingling. IBM and Seller may negotiate a mutually agreeable amount, if any, to be paid to Seller for all reasonable costs to be directly incurred by Seller and associated with this segregation. All costs in this category must be agreed to by IBM in writing prior to any such expenditure by Seller for which IBM will be obligated to pay.
7. Seller shall maintain a written agreement with each of Seller's employees sufficient to enable Seller to comply with the terms of this Agreement.
8. Seller shall secure documents, items of work in process and work products that embody IBM confidential information in locked files or areas providing restricted access to prevent its unauthorized disclosure.
9. Seller shall maintain adequate procedures to prevent loss of any IBM confidential documents. In the event of any loss, Seller shall notify IBM immediately.

Input, Inc.
December 16, 1977
Page 3

10. Seller agrees to maintain one hundred per cent (100%) accountability of goods (work in process, finished goods and scrap parts) at all times. This is applicable both to goods consigned by IBM and to goods which are manufactured for IBM. Seller shall notify IBM of loss of any items. Seller shall send all scrap to IBM at no charge (except for cost of transportation) at the same time shipment of acceptable goods is made.
11. All goods produced against an IBM purchase order shall become the property of IBM. Manufacture of excess quantities over that authorized in the applicable purchase orders shall be avoided. Should an "overrun" condition exist, Seller shall notify IBM for instructions on disposition of excess goods.
12. Seller shall return to IBM all IBM confidential information upon request by IBM.
13. If Seller is awarded a purchase order for any of the work contemplated herein, the terms and conditions of this Agreement shall govern in the event of any conflict with the terms of such IBM purchase order or other contract document.
14. IBM does not wish to receive confidential information of the Seller, and any information disclosed by the Seller to IBM shall not be deemed confidential, and IBM will not be obligated to retain any such information in confidence.
15. The term of this Agreement shall be for one year beginning 12-19-77 and ending 12-18-78 provided however, that either party shall have the right to terminate this Agreement upon thirty (30) days prior written notice.
16. The provisions of this Agreement shall survive and continue after expiration of termination of the Agreement with respect to any IBM confidential information disclosed to or obtained by Seller prior to the date of such expiration or termination, or disclosed to or obtained by Seller subsequent thereto under any purchase orders in effect on such date of expiration or termination.

Input, Inc.
December 16, 1977
Page 4

If the above terms and conditions are acceptable to Seller,
an authorized representative is requested to indicate
acceptance thereof by signing and returning one copy
of this agreement.

Yours truly,

INTERNATIONAL BUSINESS
MACHINES CORPORATION

BY: Dee W. Olson

TITLE: PROCUREMENT MANAGER

DATE: 12-16-77

ACCEPTED AND AGREED TO:

INPUT, INC.

BY: Pats C. Cunningham

TITLE: PRESIDENT

DATE: 12/20/77

AGREEMENT FOR EMPLOYMENT

Agreement made this _____ day of _____, 19____, between
INPUT, a California corporation and hereinafter called "INPUT",
and _____, hereinafter called "Employee".

1. Purpose. INPUT is desirous of employing Employee and Employee is
desirous of being employed by INPUT. In consideration of the premises, INPUT
and Employee hereby agree as follows:

2. Term. The term of this Agreement shall be from _____,
19____, to termination of employment as defined herein.

3. Confidentiality of Information.

a) In order that Employee may perform his function, INPUT may dis-
close to Employee certain confidential information relating to INPUT's
past, present, or future research, marketing, development or business
activities.

b) Except as required by his duties hereunder, Employee will never,
directly or indirectly, use, disseminate, lecture upon, publish, or
disclose in any way, any of the confidential information disclosed to
Employee or obtained by Employee through research or other means pur-
suant to the employment provided hereunder.

c) Upon termination of employment, Employee shall return to INPUT all
documents, records, notebooks, and similar repositories of, or con-
taining, confidential information disclosed to him or obtained by
him pursuant to his employment hereunder and described in paragraph
"a" of this section.

d) Employee shall promptly disclose to any person designated by
INPUT all inventions, improvements, designs, ideas, and suggestions,

whether patentable or not, and all copyrightable material (hereinafter collectively called "inventions and ideas") made, conceived, or composed by Employee, jointly or solely, in the course of, or relating to, Employee's employment by INPUT. Employee shall, upon request by INPUT, assign to INPUT, or its successors or assigns, all such inventions and ideas, and the same shall become and remain INPUT's exclusive property, whether or not patent applications or copyright registrations are filed thereon. Employee shall provide all reasonable assistance to INPUT in connection with the preparation or prosecution of any such patent application or copyright registration. Employee's obligations under this section shall survive and continue after the termination of this Agreement with respect to inventions and ideas made, conceived, or composed during the time of this Agreement.

4. Right to be Employed by INPUT. Employee hereby warrants that he is not subject to any restrictions or incapacities which would prevent him from entering into or carrying out any of the provisions of this Agreement.

5. Other Work. Employee agrees that he will not undertake any other outside employment, consulting, or work of any nature without the express written consent of INPUT.

6. Local and International Laws. Employee agrees that he will, at all times, comply with all applicable federal, state and local laws and regulations.

7. Termination. Either party may terminate this agreement by sending written notice of such termination to the other party not less than fifteen days prior to such termination. Such notice shall be ineffective until received and shall be addressed to Employee at _____

_____ or to
INPUT at 2180 Sand Hill Road, Suite 320, Menlo Park, California 94025, or
at such subsequent addresses as directed by the parties hereto.

8. Ownership. All work performed by Employee under this agreement will become the sole property of INPUT.

9. General Provisions.

- a) The term 'Agreement', as used herein, shall include any further written amendments, modifications, or supplements hereto.
- b) This Agreement will inure to the benefit of the successors or assigns of INPUT.
- c) If any of the provisions of this Agreement are determined to be invalid, they are, to that extent, omitted and the remaining provisions shall be enforceable.
- d) The failure of either party to require performance by the other party of any obligation hereunder shall not affect the right to require full performance of such obligation at any time thereafter.
- e) The validity, interpretation, and performance of this Agreement will be controlled by, and construed under, the laws of the State of California.
- f) The use of a masculine term includes the feminine term where appropriate.

Signed as of the day and year first written above.

Signed at _____

Signed at _____

EMPLOYEE:

INPUT:

by _____

by _____

DDP MARKET STUDY
QUESTIONNAIRE FINALIZATION

12 JAN 1978



SAMPLING

- o STRUCTURED BY POTENTIAL SEGMENTS AND SIZE CATEGORIES AT ENTERPRISE LEVEL.
- o COVERS AREAS MOST SIGNIFICANT TO GSD. ABOUT 50:50 - ?
BETWEEN GSD1-GSD2.
(87 - 38)
- o ENTERPRISE MUST HAVE INSTALLED AT LEAST A S/32, SERIES/1, OR EQUIVALENT.
- o INPUT WILL SELECT ENTERPRISES RANDOMLY FROM LISTS PROVIDED BY IBM PLUS OWN SOURCES.
- o ANONYMITY OF IBM/RESPONDENT.
- o TELEPHONE SCREENING PLUS ENT/ESTAB. INTERVIEWS.



DDP SEG	POT'L SEG'S	NAME	MUE	ENTERPRISE SIZE RANGES		GSD 2	UNITS
				SUE	SAMPLED		
1	1-5	WHOLESALE	20-99 100-249 250-999	NONE		1K-9.9K 10K+	EMPLOYEES
2	14-22	RETAIL	20-99 100-249 250-999	NONE		1K-9.9K 10K+	EMPLOYEES
3	34,36, 38,40	PROCESS (LESS PETROL)	- 100-499 500-999	250-499 500-999		1K-9.9K 10K+	EMPLOYEES
4	37	PETROLEUM	- 100-499 500-999	NONE		1K-9.9K 10K+	EMPLOYEES
5	35-	AERO/MOT VEH	- - 500-999	NONE		1K-9.9K 10K+	EMPLOYEES
6	35-	MACH/FAB PROD	- - 500-999	250-499 500-999		1K-9.9K 10K+	EMPLOYEES
7	45,46	BANKS	- 50-499 500-999	**		1K-9.9K 10K+	ASSETS (\$M)
8	63	SCHOOL DISTR	- 10-24.9K -	**		NONE	ENROLLMENT
9	55	HOSPITALS	100-299 300-499 500+	**		NONE	BEDS
10	65-67	CITY/COUNTY GOV'T	- - 100-249	**	250+ -		POPULATION (K)
11	41	MOTOR FREIGHT	- 5-49 50-99	**	100+ -		REVENUE (\$M)
12	64	COLLEGES	- - 5-9.9K	**	10-19.9K -		ENROLLMENT

** SEG. 7-12 HAVE NO MUE/SUE SPLIT AND ARE COMBINED UNDER MUE.



WHOLESALE (1) (19%)

SIZE (EMPL)

MUE GSD1

20-99	100-249	250-999	1K-9.9K	10K+
11 (16%)	7 (30%)	3 (10%)	2 (10%)	1 (5%) <u>24</u>

GSD2

(16)

$$DIST. = 32\%$$



RETAIL (2) (13%)

SIC E (EMPL.)

<u>HUE GSD1</u>		<u>GSD2</u>	
20-99	100-249	250-999	1K-9.9K
2 (10%)	4 (25%)	4 (25%)	3 (20%) *3 (20%) 16

* EXCLUDE DEPT./DISCOUNT STORES
 → SUCH AS SEARS, K-MART (SIC 5311)
 (POTL SEG 19)

1-6-78



M & P (34%)

SIZE (NO. EMPL.)

DDP
SEG

	<u>MUE</u>	<u>GSD1</u>	<u>SUE</u>	<u>GSD2</u>
	<u>20-99</u>	<u>500+</u>	<u>500+</u>	<u>1K-999</u>
3	P	2	3	2

$\checkmark(12) - 10\%$

4 PT.
(4) - 3%

X

①
2

X
①
2

5 MI-M2
(9) - 7%

5

2 2

6 M3-H5
(17) - 14%
(42) 34%

	7	* 2	2	3	3
	—	—	—	—	—
	3	16	4	8	8

* SIZE RANGE IS 250-499.

1-6-78



FINANCE (F) (10% OF TOTAL SAMPLE)
(BANKS)

	SIZE (#M ASSETS)				
	(2)	(3)	(4)	(5)	
TYPE BANK	50-49.9	500-999	1K-9,99K	10K+	TOTAL
UNIT	2 (15%)		1 (10%)		3 (25%)
BRANCH		2 (15%)	1 (10%)		3 (25%)
MULTI-HOLDING		2 (15%)	2 (10%)	x ² (10%)	4 (35%)
INT'L	—	—	2 (15%)	—	2 (15%)
	2 (15%)	4 (30%)	8 (45%)	x (10%)	12 (100%)

↑

Want Split!

1-6-78

Deervice IND = 34%



SCHOOL DISTRICTS (8) 2%

SIZE (STUD. ENROLLMENT) = 10-24,9 K
3 ENTERPRISES

HOSPITALS (9) 7%

SIZE (BEDS)

<u>TYPE</u>	<u>100-299</u>	<u>300-499</u>	<u>500+</u>	
SINGLE	2 (20%)	2 (30%)	3 (30%)	7 80%
CHAIN	—	2 (10%)	2 (10%)	<u>2</u> 20%
	2	3 <u>2</u>	4 <u>5</u>	<u>9</u>
	(1)	(2)	(3)	

* 20+ hospitals in chain

1-6-78

# Chains	# Beds	# Chains
1	100-299	1
7	300-499	7
9	500-999	9
11	1000-9999	11
2	10K+	2



CITY/COUNTY GOVT (10) 7%

E-2
920

SIZE (POPULATION)

	100-249K	1	250K+	
CITY	3 (25%)		2 (25%)	5
COUNTY	<u>2</u> (25%)		<u>2</u> (25%)	<u>4</u>
	5		4	9
	(3)		(4)	

1-6-28

TRANSPORTATION (II) 3%
(MOTOR FREIGHT)

SIZE (\$M REVENUE)			
5-49	50-99	100+	
X (30%)	2 (50%)	X (20%)	4 (100%)
2	3	2	

1-6-78

COLLEGES/UNIV. (12) 5%

SIZE (STUD. ENROLLMENT)

JR. COLLEGES (2 yr.)	5-9.9K 2 (100%)	10-19.9K 2 (50%)
4 yr COLLEGES	<u>2</u> (50%) 4	<u>2</u> (50%) 2

(6)



L
1. APPLICATION STRUCTURE (oriented → units)

1000 INDUSTRIAL AUTOMATION

1100 PROCESS CONTROL

1110 CONTINUOUS PROCESSES

1120 BATCH PROCESSES (ie: dye)

1200 TEST AND INSPECTION

1210 ELECTRICAL TEST AND INSPECTION

1220 OTHER TEST AND INSPECTION

1300 PRODUCTION MONITORING

1400 DISCRETE PIECE MANUFACTURING

1410 METALWORKING MACHINE CONTROL (CNC, DNC)

1420 OTHER METALWORKING EQUIPMENT

1430 ELECTRONIC PRODUCTION EQUIPMENT

1440 NON-METALWORKING EQUIPMENT

1450 N.C. TAPE PREPARATION

1500 ANALYTICAL LABORATORY SYSTEMS

1510 LAB AUTOMATION

1520 INSTRUMENT AUTOMATION

1530 EXPERIMENT MONITORING

1600 MATERIALS HANDLING

1610 AUTOMATIC STORAGE AND RETRIEVAL

1620 COMPLEX CONVEYOR SYSTEMS

1900 OTHER INDUSTRIAL AUTOMATION

Functional

or

5/1
Applications

L

FBI
FD-302 (Rev. 7-25-79)

2000 SPECIALIZED CONTROL AND DATA ACQUISITION
2100 BUILDING ENVIRONMENT
2111 ENERGY CONSERVATION
2112 FACILITIES MANAGEMENT AND SECURITY
2120 OTHER ENVIRONMENT MONITORING
2121 AIR AND WATER QUALITY
2122 AUTO EMISSIONS
2200 TRANSPORTATION
2210 MARITIME
2220 RAILROADS
2230 AUTO TRAFFIC CONTROL
2240 AIR TRAFFIC CONTROL/DISPATCH
2300 SIMULATION
3000 COMMUNICATION
3100 CONCENTRATOR/MULTIPLEXOR
3200 FRONT END PROCESSING
3300 GSD COMMUNICATION CONTROLLER
3400 MESSAGE SWITCHING
3500 TELEPHONE SWITCHING AND MONITORING
3510 SWITCHING
3520 MONITORING
4000 TRANSACTION PROCESSING
4100 PLANT FLOOR SYSTEMS

4200 INDUSTRY TERMINAL SYSTEMS

4210 HOSPITAL

4220 BANKING

4230 POINT OF SALE

4290 OTHER INDUSTRY TERMINALS

~~5000 BUSINESS DATA PROCESSING~~

5100 DISTRIBUTED HOST SUPPORT

5110 KEY ENTRY

5120 REMOTE BATCH

5130 COMBINED RJE/KE TERMINAL SYSTEMS

5140 PERIPHERAL EQUIPMENT CONTROLLER

covered

on

other

list

5200 DISTRIBUTED PROCESSING - HOST DEPENDENT

5220 MULTI-FUNCTIONAL WORKSTATION SYSTEMS

5300 STANDALONE BUSINESS D.P.

5310 DISTRIBUTED BUSINESS PROCESSING - LARGE ACCOUNT

5320 BUSINESS SYSTEMS - SMALL ACCOUNT

6000 SCIENTIFIC COMPUTATION

6100 PROBLEM SOLVING

6110 ENGINEERING/SCIENTIFIC APPLICATIONS

6120 CIVIL ENGINEERING

6130 TIME SHARING SYSTEMS

6200 INSTRUCTIONAL

6210 CAI

6220 COMPUTER LAB

6230 ADMINISTRATIVE/EDUCATION

103000 450

7000 GRAPHICS
7100 GRAPHICS ARTS
7200 DESIGN AND DRAFTING AUTOMATION
8000 OFFICE AUTOMATION
8100 TEXT PROCESSING
8200 ELECTRONIC CORRESPONDENCE
8300 ADMINISTRATIVE DOCUMENT STORAGE AND RETRIEVAL
9000 OTHER APPLICATIONS
9100 GOVERNMENT
9110 GOVERNMENT KNOWN
9120 GOVERNMENT CLASSIFIED
9200 MISCELLANEOUS/EMERGING NEW

APPLICATIONS LIST

COMMON APPLICATIONS

- 1 Billing
- 2 Inventory Accounting/Control
- 3 Accounts Receivable
- 4 Sales Analysis
- 5 Order Entry
- 6 Payroll and Labor Distribution
- 7 Accounts Payable
- 8 General Ledger
- 9 Cost Accounting
- 10 Job Costing
- 11 Purchase Order Writing
- 12 Receiving
- 13 Shipping
- 14 Personnel Records
- 15 Fixed Asset Accounting
- 16 Facilities/Equipment Maintenance
- 17 Budget Administration
- 18 Tax and Government Reporting
- 19 Stockholder Records
- 20 Mailings/Mailing Lists
- 21 Data Servicing Other Companies
- 22 Math/Statistical Analysis
- 23 Word Processing
- 24 Engineering/Research/Advanced Mgt. Computing
- 25 Remote Job Entry

DISTRIBUTION

- 26 Route Accounting
- 27 Big Ticket Inquiry/Reservation
- 28 Order Allocation
- 29 Stock Replenishment
- 30 Shelf Price Labels
- 31 Credit Authorization
- 32 Cash Management
- 33 Sales Audit
- 34 Other Distribution Applications

EDUCATION

- 35 Computer Education
- 36 Student Problem Solving
- 37 Computer Assisted Instruction
- 38 Student Records
- 39 Grade (Mark) Reporting
- 40 Student Scheduling
- 41 Attendance Accounting
- 42 Admissions/Registration
- 43 Alumni Records
- 44 Fund Raising
- 45 Census
- 46 Student Activities
- 47 Student Financial Aid
- 48 Supplies/Inventory
- 49 Other Education Applications

FINANCE

- 50 Demand Deposit Accounting
- 51 Saving Loan Deposit Accounting
- 52 Consumer Loans
- 53 Mortgage Loans
- 54 Commercial Loans
- 55 Proof of Deposit
- 56 Transit
- 57 Personal Trust
- 58 Corporate Trust
- 59 Customer Information System
- 60 Investment Management
- 61 On-Line Teller System
- 62 Correspondent Bank Servicing
- 63 Other Finance Applications

GOVERNMENT

- 64 Elections and Registration
- 65 Document Retrieval
- 66 Bill Status/Index/Retrieval
- 67 Appropriation Accounting
- 68 Income Tax
- 69 Property Tax
- 70 Other Tax
- 71 Licensing
- 72 All Other Revenues Accounting
- 73 Traffic Citation Processing
- 74 Welfare and Social Assistance
- 75 Vehicle Registration
- 76 Other Government Applications

HOSPITALS AND HEALTH

- 77 Third Party Claims
- 78 Admissions and Discharge
- 79 Patient Identification
- 80 Bed Availability/Census
- 81 Medical Records and Statistics
- 82 Automated Patient Records
- 83 Laboratory Reporting
- 84 Medicare Cost Allocation
- 85 Supplies Inventory
- 86 Cafeteria/Menu
- 87 Other Health Applications

HOTELS AND MOTELS

- 88 Front Office
- 89 Back Office
- 90 Reservations

INSURANCE

- 91 File Maintenance
- 92 Policy Accounting
- 93 Commission Accounting
- 94 Policy Issue/Renewals
- 95 Claims Processing
- 96 Policyholder's Services
- 97 Acturial and Statistical
- 98 Agency Accounting
- 99 Reinsurance Administration
- 100 Other Insurance Applications

LEGAL

- 101 Time Accounting
- 102 Disbursement Accounting

PUBLIC ACCOUNTING

- 103 Client Accounting
- 106 Time Accounting

MANUFACTURING

- 104 Bill of Material Maintenance
- 105 Engineering and Production Data
- 107 Demand Forecasting
- 108 Order Tracking and Inquiry
- 109 Materials Requirements Planning
- 110 Inventory Management/Acctg.
- 111 Shop Loading
- 112 Order Release
- 113 Shop Scheduling
- 114 Material Move Control
- 115 Stores Inventory Control
- 116 Product Costing/Estimating
- 117 Equipment Acctg. and Location Control
- 118 Project Management and Control
- 119 Cash Management
- 120 Numeric Controlled Tools
- 121 Time and Attendance
- 122 Shop Floor Data Collection
- 123 Other Manufacturing Applications

MEDIA

- 124 Classified Advertising
- 125 Media Analysis
- 126 Broadcasting Log
- 127 Other Media Applications

REAL ESTATE

- 128 Property Management
- 129 Listings and Sales

SECURITIES

- 130 P&S
- 131 Stock Record/Dividends
- 132 Clearing
- 133 Bookkeeping/Statements
- 134 Name and Address Maintenance
- 135 Margin and Cash Accounting
- 136 Certificate Safekeeping
- 137 Commission Analysis
- 138 Portfolio Applications
- 139 Mutual Fund Accounting
- 140 Firm Trading Accounting
- 141 Commodities Accounting
- 142 Options Accounting
- 143 Other Securities Applications

MOTOR FREIGHT

- 144 Freight Bill Entry
- 145 Interline Payables
- 146 Shipment Analysis
- 147 Owner/Operator Accounting
- 148 Rate Analysis
- 149 Equipment Inventory
- 150 Other Motor Freight Applications

RAILROADS

- 151 Revenue Accounting
- 152 Car Accounting
- 153 Freight Forwarder Accounting
- 154 Other Transportation Applications

UTILITIES COMMUNICATIONS

- 155 Customer Records
- 156 Revenue Accounting
- 157 Materials Management

UTILITIES POWER

- 158 Customer Records
- 159 Revenue Accounting
- 160 Materials Management

APPLICATIONS LIST

SELECT FROM THIS LIST FOR THE FIRST COLUMN OF THE TABLE ON THE NEXT PAGE.
START WITH "COMMON APPLICATIONS" FOR ALL INDUSTRIES

COMMON APPLICATIONS	
1	Billing
2	Inventory Accounting/Control
3	Accounts Receivable
4	Sales Analysis
5	Order Entry
6	Payroll and Labor Distribution
7	Accounts Payable
8	General Ledger
9	Cost Accounting
10	Bank Cashing
11	Purchase Order Writing
12	Receiving
13	Shipping
14	Personnel Records
15	Fixed Asset Accounting
16	Facilities Management
17	Maintenance
18	Business Administration
19	Tax and Gov't. Reporting
20	Stockholder Records
21	Mailings/Mailing Lists
22	Data Serving Other Companies
23	Math/Statistical Analysis
24	Word Processing
25	Engineering/Research/Advanced Mkt. Computing
26	Remote Job Entry

DISTRIBUTION	
25	Route Accounting
27	Bus/Ticket Inquiry/Reservation
28	Carrier Accounting
29	Stock Replenishment
30	Shelf Price Labels
31	Credit Authorization
32	Cash Management
33	Sale Audit
34	Other Distribution Applications

EDUCATION	
35	Community Education
36	Student Problem Solving
37	Computer Assisted Instruction
38	Student Records
39	Grade (Mark) Reporting
40	Student Scheduling
41	Attendance Accounting
42	Admissions Registration
43	Alumni Records
44	Fund Raising
45	Census
46	Student Activities
47	Student Financial Aid
48	Supplies Inventory
49	Other Education Applications

EFFECTIVE Banking	
50	Demand Deposit Accounting
51	Savings/Time Deposit Accounting
52	Consumer Loans
53	Mortgage Loans
54	Commercial Loans
55	Proof of Deposit
56	Trans.
57	Personal Trust
58	Corporate Trust
59	Customer Information Systems

FINANCE (continued)

60	Investment Management
61	On Line Teller System
62	Correspondent Bank Servicing
63	Other Finance Applications

GOVERNMENT

64	Elections and Registration
65	Document Retrieval
66	Bill Status/Index/Retrieval
67	Appropriation Accounting
68	Income Tax
69	Property Tax
70	Other Tax
71	Licensing
72	All Other Revenue Accounting
73	Traffic Citation Processing
74	Welfare and Social Assistance
75	Vehicle Registration
76	Other Government Applications

HOSPITALS AND HEALTH

77	Third Party Claims
78	Admissions and Discharge
79	Patient Identification
80	Bed Availability/Census
81	Medical Records and Statistics
82	Automated Patient Records
83	Laboratory Reporting
84	Medicare Cost Allocation
85	Supplies Inventory
86	Caterina/Menu
87	Other Health Applications

HOTELS AND MOTELS

88	Front Office
89	Back Office
90	Reservations

INSURANCE

91	Policy Accounting
92	Commission Accounting
93	Policy Issuance/Renewals
94	Claim Processing
95	Policyholder's Services
96	Actuarial and Statistical
97	Agency Accounting
98	Reinsurance Administration
99	Other Insurance Applications
100	

LEGAL

101	Time Accounting
102	Disbursement Accounting

PUBLIC ACCOUNTING

103	Client Accounting
104	Time Accounting

MANUFACTURING

104	Bill of Material Maintenance
105	Engineering and Production Data
107	Demand Forecasting
108	Order Tracking and Inquiry
109	Materials Requirements Planning
110	Inventory Management/Accr.
111	Shop Loading

MANUFACTURING (continued)

112	Order Release
113	Shop Scheduling
114	Material Move Control
115	Stores Inventory Control
116	Product Costing/Estimating
117	Equipment Accr. and Location - Control
118	Project Management and Control
119	Cash Management
120	Numeric Controlled Tools
121	Time and Attendance
122	Show Floor Data Collection
123	Other Manufacturing Applications

MEDIA

124	Classified Advertising
125	Media Analysis
126	Broadcasting Log
127	Other Media Applications

REAL ESTATE

128	Property Management
129	Listings and Sales

SECURITIES

130	P & S
131	Stock Record/Dividends
132	Clearing
133	Bookkeeping/Statements
134	Name and Address Maintenance
135	Margin and Cash Accounting
136	Certificate Safety Keeping
137	Commission Analysis
138	Portfolio Applications
139	Mutual Fund Accounting
140	Farm Trading Accounting
141	Commodities Accounting
142	Options Accounting
143	Other Securities Applications

MOTOR FREIGHT

144	Freight Bill Entry
145	Interline Payables
146	Ship Method Analysis
147	Carrier/Operator Accounting
148	Rate Analysis
149	Equipment Inventory
150	Other Motor Freight Applications

RAILROADS

151	Revenue Accounting
152	Car Accounting
153	Freight Forwarder Accounting
154	Other Transportation Applications

UTILITIES - COMMUNICATIONS

155	Customer Records
156	Revenue Accounting
157	Materials Management

UTILITIES - POWER

158	Customer Records
159	Revenue Accounting
160	Materials Management

EXHIBIT I

DEFINITIONS

1. Distributed Data Processing (DDP).

"A data processing technique whereby multiple interrelated systems are deployed along organization, functional, or geographic lines."

2. Potential

"An expression of demand for a proposed 'state-of-the-art' product function solution to a business opportunity in terms of population, units, revenue, etc."

"Business needs and economic justifications are considered. There are no market constraints (user attitudes, ability to install, etc.) or vendor constraints (availability of the product, adequate marketing coverage, etc.) applied."

- SOFTWARE: SOURCE, MAINT., LANG., DBMS, ETC.
- SATISFACTION
- DECISION MAKING
- VENDOR SELECTION CRITERIA(EG. PRICE, T/C, COMPATIBILITY)
- DATA SECURITY NEEDS
 - HOW IDENTIFICATION
 - TERMINAL KEY LOCK
 - COMMUNICATIONS ENCRYPTION
 - SECONDARY STG. ENCRYPTION
 - SECURITY JOURNALLING FOR AUDIT TRAIL
- FUTURE TRENDS FOR DDP
 - KEY FACTORS AND WHY (INCLUDE TIMING)
- NON-DDP USERS
 - WHY NOT ?
 - WILL YOU IN THE FUTURE ?
 - WHY ? WHY NOT ?
 - WHAT NEEDED? WHAT APPLICATIONS?
 - WHO IMPLEMENT?
- AWARENESS OF IBM?GSD PRODUCTS
- SPECIAL INDUSTRY QUESTIONS
- OTHER REQUIREMENTS AND COMMENTS

DDP STUDY
TOPICAL OUTLINE

DEMOGRAPHICS

- TYPE ACTIVITY AT LOCATION
- ENT SIC/SIZE (EMPL. + IND. SPECIFIC)
- ESTAB. SIC/SIZE (EMPL. + IND. SPECIFIC)
- COMPANY ORGANIZATION (FUNCTIONAL/GEOGRAPHIC)
- RESPONDENT FUNCTIONAL AREA/GEOG. AREA

INSTALLED BASE AT ESTAB. (ENT.)

- ALL SYSTEMS (MAKE/MODEL) (WHEN INSTALLED)
- MAJOR APPLICATIONS
- RELATIONSHIP TO OTHER SYSTEMS

DDP - GENERAL

- RESPONDENT DEFINITION OF DDP
- DOING DDP NOW ? IN FUTURE ?

DDP USERS

- WHAT DDP SYSTEMS INSTALLED/PLANNED ?
 - HARDWARE INCLUDING TERMINALS
 - DISPERSIONS OF SYSTEM (FUNC./GEOGR./ORGANIZ.)
 - DATA BY MATRIX
- JUSTIFICATION: WHY DDP ?
- PREVIOUS METHOD (S)
- DATA BASE DISTRIBUTION
- COMMUNICATION: SPEEDS, VOLUMES, DISCIPLINE, ETC.
- PERSONNEL
- MAINTENANCE

EXHIBIT A-2

DDP STUDY SIZE STRUCTURE

<u>SEGMENT</u>	(GSD1- <u><1000</u> EMPL)			** (GSD2- <u>>1000</u> EMPL)			<u>(EMPLOYEE SIZE)</u>
	<u>SIZE</u> <u>3&4</u>	<u>5&6</u>	<u>Z</u>	<u>SIZE</u> <u>8</u>	<u>9</u>		
1	20-99	100-499	500-999		1K-9999	10K+	
2	"	"	"		"	"	"
3	"	"	"		"	"	"
4	"	"	"		"	"	"
5	"	"	"		"	"	"
6	"	"	"		"	"	"
7*	10-50	50-500	500-999		1K-9.9K	10K+	(ASSETS-\$M)
8*	5-25K	25-50K	50K+(SCHOOL DISTRICT)	1999	500-2000+		(LARGE SCHOOL ENROLLMENT)
9*	100-299	300-499	500+	---	NONE-----		(BEDS)
10*	5-25K	25-100K	100-250K		250-500K	500K+	(POPULATION)
11*	0-1	1-49	50-99		100+	----	(REVENUE-\$M)

* - THESE SEGMENTS USE INDUSTRY SPECIFIC SIZE MEASUREMENTS WHICH ARE SUBJECT TO MINOR CHANGES PRIOR TO STUDY START.

** - USES ENTERPRISE SIZE (LIKE GSD1) RATHER THAN ESTABLISHMENT SIZE.

NOV 1977

EXHIBIT A-1

DDF SAMPLE STRUCTURE

DDP SEG.	INDUSTRY CLASS	POT'L SEG'S	NAME	20- 99	100- 499	500+	GSD1		100- 499	500+	GSD2	
							SUE	GSD1			SUE	GSD2
1	*DA,1,4,6 14-23	RET./WHLSL.		X	X	X		X	X	X	X	X
2	*D2,3,9 25	CGM/APPAREL			X	X		X	X	X	X	X
3	*P1-4,8 34,36, 38,40	PROCESS LESS P7			X	X		X	X	X	X	X
4	*P7	37	PETROLEUM			X	X				X	X
5	*M1-2 35	AERO/MOT VEH				X					X	X
6	*M3-5	MACH/FABRIC		X	X	X		X	X	X	X	X
7	F1-2,4 45,46	BANKS		X	X	X		X	X	X	X	X
8	E3	SEC.SCHOOLS		X	X			X	X	X	X	X
9	H1	HOSPITALS		X	X			X				
10	G2-3 65-67	CITY/COUNTY GOVT		X	X			X	X	X		
11	T2	41	MOTOR FREIGHT		X	X					X	
APPROX. % OF BUDGET...				5	15	20		4	6	20	30	100%

*- 1976 INDUSTRY ALIGNMENT; SERVICE INDUSTRY IS 1977

POTENTIALS REPORTS

SIZE RANGE TABLE

IND	SIZE 1	SIZE 2	SIZE 3	SIZE 4	SIZE 5	SIZE 6	SIZE 7
ALL DISTRIBUTION							
LEGAL							
BUS. CONSULTANTS					GSD 1 EMPLOYEES		
MEDIA							
EXCHANGES	1-9	10-19	20-49	50-99	100-249	250-499	500-999
SECURITY DEALERS							
CR. UNIONS							
FINANCIAL SVCS.							
MANUFACTURING					GSD 2 EMPLOYEES		
PROCESS							
AIRLINES	1-9	10-19	20-49	50-99	100-249	250-499	500 +
UTILITIES							
HISC (NEC)							

				GSD 1 REVENUE IN MILLIONS			
	-	-	-	(1-4) \$-9		10-50	50-100
MOTOR FREIGHT							
TRANSPL. OTHER							
				GSD 2 EMPLOYEES			
	1-9	10-19	20-49	50-99	100-249	250-499	500 +

				GSD 1 & 2 ASSETS DEPOSITS IN MILLIONS			
COMM. BANKS	-	0-10	10-25	25-50	50-100	100-500	500 +
S & L BANKS							
P & L CARRIERS				GSD 1 & 2 PREMIUM INCOME IN MILLIONS			
LIFE & HEALTH							
H. W. P FUNDS							
INS. AGENCIES	0-1	1-3	3-5	5-10	10-20	20-50	50 +

				GSD 1 BEDS			
HOSPITALS	0-49	50-99	100-199	200-299	300-399	400-499	500 +
ICCS & LABS	1	2	3-6	7-15	16-30	31-50	50 +

SIZE RANGE TABLE CONTINUED

<u>IND</u>	<u>SIZE 1</u>	<u>SIZE 2</u>	<u>SIZE 3</u>	<u>SIZE 4</u>	<u>SIZE 5</u>	<u>SIZE 6</u>	<u>SIZE 7</u>
<u>GSD 1 SCHOOL DISTRICT ENROLLMENT</u>							
ELEM. & SEC. ED.	1-1199	1200-4999	5K-9.9K	(10K-25K)	25K-50K	-	-
<u>GSD 2 LARGE SCHOOL ENROLLMENT</u>							
	500-999	1K-1499	1500-1999	2K-2.5K	2.5K-2.9K	3K-3.5K	3.5K +
<u>GSD 1 ENROLLMENT</u>							
COLLEGES & UNIV.	0-499	500-999	1K-2.49K	2.5K-4.9K	5K-9.9K	-	-
	10K-20K	20K-30K	30K +				
<u>GSD 1 POPULATION</u>							
COUNTIES	1-2.5K	2.5K-5K	5K-10K	10K-25K	25K-50K	50K-100K	100K-250K
	-	-	-	250-500K	500K-1M	1M +	
<u>GSD 1 POPULATION</u>							
MUNICIPALS	1-2.5K	2.5K-5K	5K-10K	10K-25K	25K-50K	50K-100K	
	-	-	-	100K-250K	250K-500K	500K-1M	1M +
<u>GSD 1 POPULATION</u>							
TOWN DISTRICTS	1-2.5K	2.5K-5K	5K-10K	10K-25K	25K-50K	50K-100K	100K +

